AN EXPLORATION OF FACTORS WHICH HAVE AN IMPACT ON THE VOCAL PERFORMANCE AND VOCAL EFFECTIVENESS OF NEWLY QUALIFIED TEACHERS/LECTURERS

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ABSTRACT

The aim of this project was to explore whether voice care and development, prior to qualification, could mitigate potential vocal attrition in newly qualified teachers/lecturers within their first year of teaching.

A specific focus of the research was to see if any causative relationship could be seen to exist between vocal change, specifically change in vocal quality, and the exigencies of the teaching role. Vocal quality in this instance is defined as the way in which individual voices demonstrate discrete features of pitch, resonance, degree of breathiness and clarity of the note. The sum of these features is perceived as voice/vocal quality.

The study sought to gain a deeper knowledge of the vocal demands of the teaching role with a particular focus on the experiences of newly qualified teachers and lecturers. It was hoped, that information gained as a result of the study, would add to the current canon of knowledge regarding the vocal demands on teachers as a feature of their professional role.

As a result of the study a number of important elements were identified, some of which go beyond the original focus of the research but arise from data gathered doing it. A number of recommendations are made which, it is hoped, will inform future working practice and increase vocal health within the teaching profession.

PREFACE

INTRODUCTION

This chapter will profile my research journey, and reflect on the process as I experienced it. As this is a personal reflection, the first person singular has been used. In the rest of the text an impersonal style has been used as is more normal in such research texts.

BACKGROUND TO THE RESEARCH

When looking at my motivation for this research my past professional experience was pivotal to the research focus. I agree with Ball (1990) who suggests that the researcher's identity, values and beliefs become part of the equation − a built-in component that cannot be eliminated as an influence on the end-product findings of the project. The research journey was dictated not only by the research design and methodology chosen to meet the demands of the research, but also by my interests and abilities. In addition, as with much qualitative research, it was important to recognise that my character and personality will influence the progress and process of the research, as was the case with this study.

PROFESSIONAL BACKGROUND

I am a qualified speech and language therapist, currently a member of the Council of the British Voice Association. My professional focus of interest is in occupational voice disorders, with a particular emphasis on the problems experienced by teachers whose well-documented vocal problems have been the focus of a number of studies for some decades. I was a member of the Voice Care Working Party which began, as part of an initiative by the British Voice Association, to offer workshops on Voice Care and Development to Teachers throughout the United Kingdom (Povey and Freeman 1990). The one-day workshops that I ran, under the aegis of the Voice Care Network, with a voice teacher were offered as INSET (Inservice Training) days, and were held at the invitation of the Institute of Education in London and Local Education Authorities.

VOICE CARE SURVEY

Such were the concerns expressed by teachers who attended the workshops regarding their vocal health that a decision was taken to set up a database concerning the teacher and their voice. I was asked by the British Voice Association to undertake a study into the impact that the Voice Care and Development Training had on teachers, with the main aim of the survey being to establish whether voice training, which was undertaken in a number of centres throughout the United Kingdom, was beneficial (Martin 1994). The sample population was gathered from those teachers who had attended a training course in the past and who had responded to the postal questionnaire, which was sent to over 200 teachers.

Survey Findings

One of the findings from the study, which focused on a wide range of issues, including the teachers' experience of undergraduate voice training, was that 98 per cent of the teachers surveyed agreed that voice was an important professional tool. Ninety-seven per cent of those surveyed considered that voice should have received more attention during training. Of those questioned, only 17 per cent had practical voice work incorporated into their teacher training. The importance of voice care education had been highlighted through the responses from this survey (Martin 1994), which revealed that voice training had made a critical difference to the voices of those teachers who attended courses, thus highlighting for me the importance of training and the difference it could make.

A further outcome from the survey was that those teachers who had attended the voice workshops were anxious that further information was available to them about voice care and voice use within the teaching environment. With sponsorship from the British Voice Association, I was commissioned to write a text for teachers which was co-authored by the voice teacher with whom I ran the voice courses (Martin and Darnley 1996). The text encompassed information on the structure and function of the voice, vocal health, advice on vocal care, strategies for maintaining good voice under adverse teaching conditions in addition to practical work to develop voice. As part of the research for the book it was found that those individuals who had received voice work as part of

teacher training tended to be older rather than younger teachers, which suggested that voice training had gradually been squeezed out of teacher training. This came from information gained from the survey and anecdotal evidence which came from talking to teachers.

VOICE CARE AS PART OF TEACHER TRAINING

In 1997 I had an opportunity to supervise a final year undergraduate voice project (Bufton 1997). The student was interested in building on the work I had done for the British Voice Association, in order to look at what, if any, changes had taken place in voice care education for trainee teachers. As a primary aim, the student wanted to try to establish exactly how many teacher training establishments were offering voice care education to students, how much and in what format this training was being delivered.

The results from this project showed that there had been a slight increase, from 36.4 per cent to 45.5 per cent in the number of BEd courses offering their students voice care education. The amount of time devoted to this tuition was varied and in less than a quarter of the colleges was a speech and language therapist employed to deliver the course.

THE RESEARCH JOURNEY

This finding and my previous work was the background to my desire in 1997, to see whether my own conviction, which had been growing for some time, was correct - that if voice training was offered to teachers as part of qualification, it would reduce vocal abuse and misuse once they qualified. I had personal experience through the Voice Care and Development courses I had been running of the difference that this work could make to teachers. A number of teachers had returned to the courses at the Institute of Education reporting substantial improvement in their own voice quality, and noting the concomitant effects of increased ability to maintain order in the classroom, less stress and anxiety as a result of greater vocal health and less time off work with voice-related problems. I was also aware, through my work as a clinician, of the huge emotional, social, personal and career toll that voice problems placed on teachers. Yet in many cases these voice problems could have been prevented. I felt very strongly that the profligate loss to the profession of able teachers was of concern and the cost in both

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personal and financial terms was considerable. I felt quite evangelical about setting out to discover if I could prove that voice training could be shown to have some value rather than relying on anecdotal evidence.

ACADEMIC SUPPORT

In looking for an academic institution which might be prepared to support my study, I was then reminded of my student's anecdotal account of the very positive response and interest shown by the University of Greenwich, when they agreed to take part in her project, and I decided to approach the university to see if my own proposal might be of interest.

A preliminary meeting took place in January 1998 and Professor McNay agreed that there was merit in the research proposal and invited me to submit an application form. When the letter of acceptance arrived from the university the mixture of excitement and fear I experienced was intense.

REVIEW OF THE PROCESS

In reviewing this process after the passage of four years, I remember that the over-riding feeling I had was one of personal achievement. This was related to a number of factors, not least that the acceptance represented an acknowledgement by the university at that point in time of my ability to undertake the research. The study would allow me to focus on and explore an area of great personal interest and to have an opportunity to discover if indeed my hypothesis was correct. I had a feeling of exhilaration, which was incredibly empowering, the first experience of the 'highs' associated with the 'highs and lows' of the research process. This feeling of exhilaration supported me through the early stage of the research journey. I joined the Master's level research methodology class and from there with huge enthusiasm and a messianic zeal to succeed I went into fieldwork. Would that those feelings remained for the subsequent four years.

Yet in reviewing the energy, commitment and personal resources needed for such a project I am aware that it would not have been possible to maintain that role of zealot over a four-year period. Instead what I experienced was rather more a pendulum swing of emotions: enthusiasm, fear, dread, resentment, pride, anxiety and ultimately a sense

of achievement. The research process has provided me with new areas of knowledge that are of great value, not only about the topic but also about myself and my learning and coping strategies.

It would be unrealistic to chart my research journey in detail over the four-year period, but it is perhaps appropriate to look at significant issues, which affected both the research process and my ability to continue with the research.

Funding the Research

Research funding for part-time students is very difficult to access. For some students it is possible to get support from their employer; in my case this was not possible, and the research design incurred some significant costs. Of most critical importance was my working environment, which fortunately allowed for flexible working practices. It is unlikely that I could have undertaken the research as a part-time student had my job at that time, not given me the flexibility to work at weekends or in the evenings. This, however, was a 'mixed blessing' as the research process imposed a significant additional load on a full-time work schedule and on many occasions anything approaching a normal work pattern proved impossible to sustain.

Research Design

Much of the research design was predicated on the notion that the subject group would be prepared to 'do something' for me, and for that to happen it was critical that I established a good working relationship with each individual. I think that my background as a clinician and lecturer was helpful in this regard. This has given me the experience, gained over many years, of establishing relationships with a great variety of people with very different needs. So too my teaching experience, which allowed me not only to deliver the training material initially, but also to be aware of some of the overriding issues germane to teaching, encouraging dialogue and the development of a 'partnership' model of working. Notwithstanding this, I was effectively in the position of supplicant, as it would not have been possible to 'demand' that individuals attended a specific recording session, or completed a particular questionnaire.

Establishing Individual Relationships

In establishing this relationship I had therefore to be prepared to fit into the schedule of each individual who agreed to take part. This meant, for example, that when recording interviews or follow-up voice recordings, I had to travel at times and dates that suited each individual. Not only did this require stamina, flexibility and organisational skills, it also required me to fund such travel, which had to be by car to transport the necessary specialist voice recording equipment

The research process is often considered to require qualities of independence, drive and self-motivation on the part of the researcher. An additional but not always explicit requirement of research, as was the case with this study, was the need for me to feel comfortable within a framework that often places the researcher in the already noted supplicant/dependency role. In having to access or gather data from my subject group, I was very aware that I was completely dependent on their co-operation, their desire to help for no appreciable gain, their permission to enter their home or work place, their willingness to disclose facts about their personal and private life which were intrinsic to the work. In thinking about what I offered in exchange for this participation I am aware that each individual appeared to be genuinely interested in the outcome of the research. There was an interest at a very personal level of the changes that they had noted in their voice quality and in comparing the changes that I had noted. There was an interest in how other people within the group were getting on, and some questioning as to how their experience compared to that of others.

One of the major bonuses of having such a small sample was the opportunity it afforded me of getting to know each participant, which resulted in a much easier exchange of information and a much closer relationship was I have tried to maintain the relationships and continue to update participants as to my progress each year.

Perceptual and Acoustic Analysis

An 'expert listener' supported me on a voluntary basis in the perceptual and acoustic analysis of the voice recordings. Due to the voluntary nature of this support, the process of perceptual analysis could only be completed at times which fitted into the

expert listener's personal and professional timetable. Time available to complete the acoustic analysis was additionally complicated by the need to limit the work to occasions when bench time was available at University College London. The research process was in effect hostage to the time that the expert listener could devote to it.

In response to the support that was being given to me, adaptation of the research process took place in order to meet the needs of significant contributors. This in turn demonstrated that in qualitative research, the interdependency of variables may at times be a source of anxiety as well as strength.

Physical and Mental Health

The impacts of changes in either physical or mental health were aspects of the research journey which I had not really considered in advance. While for most of the time I experienced great excitement as new findings emerged, contact with the subjects proved rewarding and results were achieved, there were other less positive sides to the process. Due to the particular nature of the research, there was persistent anxiety at critical periods in the research process when, for example, awaiting responses from the subject group, or when critical time frames were in jeopardy. Attempting to juggle the demands of my own work with that of the research work was at times very difficult, but this is I imagine symptomatic of being a part-time researcher. As a result I experienced periods of considerable stress as a result of the work 'overload' and indeed physical exhaustion as a consequence. The effect of this led me to question, on occasion, why I had begun the journey and whether it was worth completing.

In addition to periods of introspection and anxiety, there is a relentless quality in the nature of research which meant that, even during periods where a time pressure did not exist, I was conscious of the need to 'keep going' and felt guilty if not working on the research. In order to maintain the work momentum I, in consultation with my supervisor, set specific deadlines by which date delivery of a piece of work was guaranteed a strategy which worked for me.

During the writing up period, I experienced, for a limited period, what could be loosely described as 'writer's block', which was extremely dispiriting and added considerably to

my level of anxiety. My strategy for dealing with it was to sit down and attempt to write but not to remain for long periods waiting for inspiration. One day I sat down as usual and suddenly I knew how to start the recalcitrant chapter and what I wanted to say.

REVIEW OF THE RESEARCH JOURNEY

In reviewing the research journey, most striking to me is the fact that the research process may be seen as an entirely selfish process, which consumes the thoughts and attention of the researcher. For long periods of time I was completely absorbed, often to the exclusion of my needs and that of my family and friends. Most other events in my life were subordinate to the process of both doing and writing up the research. The deferment of pleasure principle was a motivation to continue; I would make elaborate and probably unrealistic plans as to what I would do when the research finished.

Yet, paradoxically, the writing process offered me an opportunity to escape to an oasis of quietness and concentration. Surrounded by the paraphernalia of writing, the study became curiously enfolding, and I was aware when writing the final chapters that there would be a huge void in my life when this process came to an end.

As a personal journey it has offered much in terms of self-discovery, but of perhaps most value have been the numerous examples it has offered me of the kindness of strangers. Like Blanche in A Streetcar Named Desire (Williams 1955) I have been dependent on the kindness of strangers; strangers who were prepared to give time and effort to an idea, to the perpetrator of that idea and to the means of carrying it out. Enormous encouragement was received from my supervisor, Ian McNay, whose support was invaluable; Garry Bodenham at The University of Greenwich conducted all the initial recordings and all subsequent recordings for those who chose to attend Greenwich rather than be recorded at home. Ann Parker fulfilled the role of 'expert listener' with great generosity and patience. My family have encouraged me in my entirely self-serving occupation and accepted my exile from their lives with great tolerance and equanimity; friends have been interested in my progress.

What I would now hope is that the research could be used to serve the needs of those who gave such unstinting support to me and to whom this research is dedicated – teachers.

CHAPTER 1

Framing the Study

This chapter will review the literature on voice with specific reference to aspects of vocal quality rather than voice production. It will offer an historical review of the way in which voice quality has been described in the past and examine the way in which voice disorders are perceived and defined.

The chapter will reflect on the ongoing policy debate regarding the provision of voice care and development training as part of teacher training. It will also consider the impact that voice disorders have on the professional voice user with specific reference to those within the teaching profession who are the focus of the study, namely teachers and lecturers.

CHAPTER 1

1.1 INTRODUCTION

This chapter will consider voice with specific reference to aspects of vocal quality rather than voice production. It will initially offer a short historical review of the way in which voice quality has been described in the past, and then examine the way in which voice disorders are perceived and defined by voice specialists. Finally, the chapter will consider the impact that voice disorders have on the professional voice user, with specific reference to teachers and lecturers, who are the focus of this study.

1.2 HISTORICAL PERSPECTIVE

Descriptions of voice quality have a notable lineage; examples of voice quality are many and varied. Through history there are frequent references to voice quality by physicians, philosophers, surgeons, authors, playwrights, poets and critics.

Voice quality is referenced in the Bible, 'I was in the Spirit on the Lord's day and heard behind me a great voice, as of a trumpet' (Revelation 1v.10).

Quintilian (35-100 AD) Roman rhetorician, educationalist and literary critic wrote in the Institute of Oratory 'the voice is as easily distinguished by the ear as the face by the eye' (Watson 1899).

Rhazes, a noted physician (865-925 AD), gave a detailed description of voice disorders, principles of vocal hygiene and voice training. (Cited in Kotby 1995)

Shakespearean descriptions of vocal quality abound:
> ' his big manly voice,
> Turning again towards childish treble, pipes
> And whistles in his sound'
> (As You Like It 11 ii)

'My Lord, I was born about three of the clock in the afternoon with a white head and something of a round belly. For my voice, I have lost it with hollaing and singing of anthems.'

(Henry IV Part 2)

Teachers and lecturers may not sing many anthems or holla as Sir John but many will like him lose their voice and for some this may signal a severe curtailment, if not an end, to their professional careers.

1.3 CLINICAL DESCRIPTION AND DEFINITION

The Clinical Guidelines by Consensus for Speech and Language Therapists published by the Royal College of Speech and Language Therapists in 1998 contains the following entry:

Clinical Voice Disorder (Dysphonia)

1. Definition/Description

Dysphonia is the term applied to a voice, which is characterised by an abnormality of pitch, volume, resonance, quality or which is inappropriate for the age or gender of the speaker. Aphonia is the absence of phonation.

1.1 Prevalence

Dysphonia is related to a disturbance or loss of laryngeal function caused by organic, functional or psychogenic difficulties. Conservative estimates of prevalence vary between 28 to 89 per 100,000 population (both children and adults).

1.2 Impact

Voice disorders impair communication and can cause discomfort and anxiety. Clients and relatives frequently associate the symptoms with carcinoma of the larynx. Voice disorders can affect education and employment, not only through loss of days at work or schooling, but also through the inability to continue in a chosen career, particularly for those who are professional voice users. (p.38)

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This entry effectively summarises the clinical component of voice disorders. At the same time it highlights the compelling issues surrounding voice disorders, such as loss of communicative effectiveness, anxiety, the effect on employment, loss of days at work and the potential inability to continue in a chosen career, particularly for those who are professional voice users.

1.4 PROFESSIONAL VOICE USERS

The generic term 'professional voice users' is often used to refer to those individuals whose professional role and employment is dependent on effective and efficient use of voice, and this term is particularly important for the purposes of this study. In the United States of America, according to Ramig and Verdolini (1998), of a total working population, 24.49 per cent or 28,269,000 individuals had jobs that critically require voice use. In this group may be included, for example, actors, politicians, radio announcers, barristers, singers and teachers: teachers – the group with whom this project is specifically concerned are classified as professional voice users.

Ascribing the term 'professional voice user' would seem to carry with it an implicit expectation that the individual will have had training to bring their vocal skills up to a 'professional' level. It suggests that by training, expertise and ability, their vocal skills allow them to use their voice effectively in a variety of settings, and to different numbers and groups of people. In reality, when teachers are referred to as professional voice users, the term is more accurately describing voice as an essential component of the exercise of their professional role - that is, the amount of time during their working day that the teacher has to spend talking. In effect, the description refers to the extent of their vocal load, rather than referring to their competent use of voice or to any previous voice training that has been undertaken.

Jackson (1968) suggests that teachers engage in 200 to 300 exchanges every hour of their working day, which adds up to 1200 to 1800 exchanges during their working day and does not take into account discussion during breaks or before or after school. In 1993 Masuda *et al* analysed speaking behaviour among a group of patients with vocal abuse. When the speaking habits of teachers and patients from other professions who had nodules on their vocal folds were looked at, it was discovered that these two

groups spoke over three times as much as, for example, vocally healthy office workers. The office workers had an average phonation time of 33 minutes over an eight-hour period, whereas the teachers and patients had an average phonation time of 102 minutes over the same period, with half the phonation time at high intensity, or at 80 dB and over. This study also showed that after school phonation time for the teachers was very short. If an assumption is made that a similar speech pattern will apply to most teachers, then a picture emerges of extensive speaking periods at high intensity during school and college hours, with a much reduced phonation time out of school or college.

1.5 LEVELS OF VOCAL USAGE

Koufman (1998) identifies four levels of vocal usage, which neatly illustrate the link between professional demands and vocal load. He suggests the following categories:

The Elite Vocal Performer, Level I is a person for whom even a slight aberration of voice may have dire consequences. Most singers and actors would fall into this group, with the opera singer representing the quintessential level 1 performer.

The Professional Voice User, Level II is a person for whom a moderate vocal problem might prevent adequate job performance. Here he would include *teachers, lecturers* and the clergy. (italics are the researcher's)

The Non-Vocal Professional, Level III is categorised as a person for whom a severe vocal problem would prevent adequate job performance. This group includes lawyers, physicians, business men and women.

The Non-Vocal Professional, Level IV is a person for whom vocal quality is not a pre-requisite for adequate job performance. In this group would be found, for example, clerks and labourers.

1.6 VULNERABILITY OF TEACHERS TO VOICE PROBLEMS

Teachers and lecturers might be surprised to see their professional role featured in such a dominant position on this list, as for many teachers, any voice work during their training is minimal. Bufton (1997) suggests that, as a result, teachers increasingly form a

disproportionately large number of patients attending for voice therapy. A small-scale study in 1992, of 56 speech and language therapy clinics within the United Kingdom, recorded an average figure of 6.7 teachers per clinic attending for voice treatment during one specific month (Martin 1994). In 1997 questionnaires were sent to those same speech and language therapy clinics, and the responses obtained from 53 of these clinics showed that the figure had risen to 8.2 teachers per clinic (Bufton 1997). It was not possible to determine whether this increase was simply a function of general growth, or the result of increased awareness of the provision available for teachers with voice problems, or an increase in the incidence of voice problems within the teaching population. Bufton's study suggested that 14.8 per cent of all patients attending the participating clinics were teachers. These teachers were typically presenting with vocal fold nodules (31 per cent) and functional voice disorders (48.9 per cent), both, according to Dworkin and Meleca (1997), primarily caused through chronic vocal abuse or misuse and stress.

Bufton's figures appear to be significantly less than Comins' study of 1992 (which suggested that 34 per cent of voice patients in the speech and language clinics in her sample were teachers), but more in line with those of Morton and Watson (1998) in Northern Ireland. It should, however, be remembered that facilities in speech and language clinics vary throughout the United Kingdom, with some hospitals having specialist voice clinics, so Comins' figures regarding teacher numbers need to be viewed in the light of this potential bias.

Morton and Watson (1998) reported that in a 12-month period in Northern Ireland, 15 per cent of new patients were from the teaching profession. As teachers constitute only 2 per cent of the work-force in Northern Ireland this represents a high proportion of the total. In the USA a study of more than 1,000 voice patients (Titze *et al* 1997) established that teachers constituted 20 per cent of the clinical load. As teachers constitute 4.2 per cent of the workforce in the USA this again seems a disproportionate representation on clinical caseloads.

In other studies in a number of countries, teachers have been identified as a vulnerable group. Questionnaire studies were undertaken by Aaltonen (1989) and Pekkarinen *et al*

(1992), and demonstrated that only 20 to 30 per cent of the teachers who responded were completely free from any voice problems. More than 10 per cent reported suffering from one or more symptom of vocal fatigue weekly. In another earlier study (Gunderman 1970) almost five per cent of the teachers were reported to suffer from voice problems affecting their working ability.

A study by Herrington-Hall *et al* (1988) in the United States explored the occurrence of laryngeal pathologies and their distribution across age, sex and occupation. This study concluded that teaching was one of the top ten occupations of those who presented with voice disorders, supporting an earlier study by Cooper (1973) where teachers came second in his survey of 956 patients, spanning 22 occupations. Several later studies have looked at episodes of vocal attrition among teachers, for example, Sapir *et al* (1993), Martin (1994), Smith *et al* (1997) and Koufman (1998), and confirm the high incidence of voice problems within this professional group in comparison to other occupations.

A recent longitudinal study in Brazil (Dragone *et al* 1998) followed 69 female elementary school teachers, and compared and contrasted voice quality. A total of 79 per cent of voices were considered to have some degree of alteration after two years of teaching. Seventy-seven per cent of voices classified as predisposed to dysphonia on the first assessment were considered dysphonic on the second assessment. Teachers in Brazil have no vocal preparation for teaching and that study evidenced poor physical conditions, a high number of students per class, stress and low salaries as contributory factors.

1.7 OCCUPATIONAL HEALTH ISSUES

All these studies have demonstrated the effects of teaching on voice problems; certainly the adverse impact on professional careers is well documented. In the United Kingdom two ground breaking court cases within the past seven years, Oldfield (1994) and Clowry (1996) highlighted the problems experienced by those in the teaching profession. The courts found in favour of the two teachers whose voice loss, which effectively forced them into early retirement, was agreed to be due to the demands of

their teaching roles. It is to be regretted that these cases do not appear to have led to a review of the evidence, noted above, of the link between teaching and vocal attrition.

An ongoing Europe-wide survey on Occupational Safety and Health (OS&H) Arrangements for Voice and Speech Professionals (Vilkman 2001) recorded responses from 15 countries. Vilkman noted that using OS&H legislation as a background for the professional voice user, there is a poor level of application of the employer's duty to take care of:

> 'The prevention of occupational risks, the protection of safety and health, the elimination of risks and accident factors, the informing, consultation.and training., as well as general guidelines for the implementation of the said principles'
> Council Directive: On the introduction of measures to encourage improvements in the safety and health of workers at work. 89/391/EEC. Brussels 1989

The then solicitor to the Professional Association of Teachers in the United Kingdom, David J. Brierley, gave the following response to part of the Vilkman questionnaire. In answer to the question, 'Are voice disorders considered as occupational diseases?' he wrote:

> 'Loss of voice for teachers is not generally recognised either in the legal sense or the lay sense as an occupational disease. It is more generally understood to be an occupational hazard which teachers should have to put up with. It is not generally recognised that the damage that can be caused to a teacher's voice by misuse or excessive stress can be potentially very serious, ultimately leading to permanent voice loss.'

Teachers who have seriously damaged their voices at work report symptoms such as:

> Not being able to speak above normal background noise, such as a television, general conversation, traffic or engine noises from inside a car.
> Not being able to engage in any lengthy conversation.
> Constant hoarseness and clearing of the throat.

Brierley's material (Vilkman, personal communication) suggested that these symptoms could have a dramatic effect on the individual's daily routine. He gave the following examples:

Casual conversation and chatting becomes difficult.

Use of alternative methods of communication rather than speech.

Inability to shop alone because of communication problems.

Loss of confidence and an end to social and recreational activities.

This self-reported evidence clearly demonstrates both the extent and effect of voice problems on teachers' professional and personal lives. It is also apparent from this catalogue of 'vocal damage' that voice problems, as a direct consequence of the teacher's professional role, are considerable.

1.8 TRAINING AS A PREVENTATIVE TOOL

Almost five decades ago, West *et al* (1957), stated:

'No amount of vigorous vocalisation can damage the edges of the vocal folds if the voice is properly used ... ' (p.76)

Four decades ago Brodnitz (1965) wrote:

'Technically the lack of proper instruction during professional training in the use of the speaking voice is responsible for many voice disorders ... ' (p.455)

Cooper (1973) said:

'... overuse of the speaking voice does not occur at any time unless the speaking voice is misused and abused. There is no such condition as overuse of the speaking voice if the speaking voice is properly used. Voice disorders are not due to overuse of the voice; they are due to misuse and abuse of the voice. A voice well used is essentially never overused' (pp15-16)

Treatment for vocal abuse and misuse is predicated on the clinical evidence that for the majority of voice patients, therapy is successful in remediating the problem. Preventative voice care should be successful in mitigating the worst effects of

professional vocal damage and, as a consequence, teachers would be able to monitor and sustain their own voice effectively throughout their working life.

Instructing teachers in voice care can be demonstrated to have a beneficial preventative effect on subsequent vocal damage. Bistrizki and Frank (1981 in Sapir *et al* 1993) compared 37 elementary teachers in Israel who had received instruction in vocal hygiene prior to becoming teachers with 40 teachers who had not received any training. The two groups, who were carefully matched, were studied between two to four years after they had begun training. Of the teachers without vocal training, 85 per cent reported vocal fatigue, 80 per cent reported hoarseness, and 42 per cent had experienced aphonia or loss of voice. The prevalence of these and other symptoms was found to be significantly lower in the vocally trained group. A similar study by Chan (1994) found that a group of twelve kindergarten teachers who explored the concepts and knowledge of vocal abuse and vocal hygiene showed significant (sic - no figures given in study) voice improvements over two months in comparison to a control group. A study by Martin (1994) revealed that in a sample of 95 teachers who had received post-graduate voice training 58 per cent felt that there was a change in their voice after the training session and 84 per cent of those who had noted a change stated that this change had been sustained. Seventy-seven per cent of respondents had changed their vocal behaviour as a result of the training sessions while 75 per cent felt that their attitude to their own voice changed as a result of training. The responses indicated that teachers had taken 617 days' sick leave with voice-related problems before the training and only 103 after. A limitation in the design of the questionnaire meant that a like-for-like comparative time analysis before and after training could not be made. Nevertheless, the figures suggest that, after training, substantially less working time was lost through voice related problems.

In 1994 Martin highlighted the fact that in the United Kingdom few Colleges of Education offered voice courses for teachers as part of their training. In 1996, the Voice Care Network in conjunction with the English Speaking Board and the Society of Teachers of Speech and Drama published the following resolution;

> 'Initial Teacher Education Courses need to provide quality training in use and care of the voice, as the essential tool of professional verbal communication, in

order that all intending teachers (both secondary and primary of all subjects) have understanding and practice of how voice is controlled, sustained and adapted for effective verbal delivery that commands respect and gains response'

Voice Matters – June 1996 (p.4)

In response to the above resolution, Anthea Millet, the then chief executive of the Teacher Training Agency (TTA), stated that institutes of teacher training have a duty to ensure that all newly qualified teachers have the necessary skills to communicate effectively in the classroom. The TTA recognises that colleges provide this in a variety of manners, in some instances a voice training component is built into the training curriculum, in other cases voice training is targeted at specific individuals who require it.

1.9 TEACHER COMPETENCE REQUIREMENTS

It should be noted that the TTA does not cover Higher Education or Further Education. However Circulars 9/92 and 14/93, issued to all training institutions by the Department for Education in 1992 (DFE 1992), stated that, among other things, all qualified teachers must be able to communicate clearly and effectively through questioning, instructing, explaining and feedback. This continues to be part of the updated Circulars issued by the Department for Education and Skills (DfES). New Standards and Requirements included in Qualifying to Teach (TTA 2002), which apply to all trainee teachers and programmes of initial teacher training from September 2002, state that those awarded qualified teacher status must demonstrate that they can 'communicate sensitively and effectively with parents and carers' (TPU 0803/02-02).

Although the circular makes no specific reference to voice quality, it could be argued that it should, as vocal quality is accepted as an essential parameter of the communication process, (Aronsen 1980; Linklater 1976) and vocal attrition compromises the effectiveness of the message. Abnormal voice is correlated with negative judgement of personality by children (Lass *et al* 1991), so it could be suggested that vocal attrition may adversely affect pupils' perception of their teachers and consequently their education. Recent evidence shows that a teacher's voice problem can affect pupils' education (Morton and Watson 1999).

In the Further Education sector, FENTO (1999) proposes a list of 'personal attributes' which are to be displayed by the FE lecturer. These include 'personal impact and presence', attributes in which good communication is implicit if not stated explicitly.

1.10 TRAINING PROVISION

Given these facts, it is regrettable that a more consistent and targeted approach to voice care is not yet apparent in teacher training. The General Teaching Council for Scotland is the only Teaching Council in the United Kingdom, to have produced a policy document regarding voice in the teaching profession. The DfES in their Healthy Schools Healthy Teachers (2001) website does recommend that teachers and trainee teachers should be referred to specialist help from a speech and language therapist and/or an ENT consultant should they experience vocal problems. It is notable that there is an increasing effort by some organisations to mitigate vocal abuse or misuse. In the United Kingdom, for example, British Airways and the British Airports Authority have instigated voice training for their airport announcers, and the print industry has introduced noise havens or booths for their workers.

Suggestions have come from some of those closely allied to education. For example, in 1999 Lord Putnam proposed to the government task force he chaired that unemployed actors should give teachers lessons on how to project and protect their voice (Smithers 1999). Kay Driver, general secretary of the Professional Association of Teachers (PAT), addressing the union conference in July 1999, said that it was important to convince the government that it was better to try to prevent voice damage than to have teachers off sick and disrupting pupils' education or leaving the profession (ibid).

In 1997 a study investigating the changes occurring between 1992 and 1997 in the provision of voice care education for trainee teachers was undertaken (Bufton 1997). This study looked specifically at Bachelor of Education (BEd) courses offering students voice care education. In 1992, 36.4 per cent of colleges questioned stated that they made such provision, whereas in 1997 this figure had risen to 45.5 per cent. Although this outcome would initially appear positive it should be noted that within the same time period the number of colleges where voice care education was compulsory had reduced. In 1992, 87.5 per cent of colleges offering provision stated that students must attend

these lectures; by 1997 this figure had reduced to 60 per cent. So although it may appear that more students were receiving voice care education, in reality fewer may have done so. The survey also raised questions regarding the number of hours of voice care training to which the students had access, with times ranging from one hour to 18 hours.

Of some concern was that in both 1992 and 1997 less than a quarter of the colleges employed a speech and language therapist to deliver the course. As with the suggestion by Lord Putnam (Smithers 1999) for out-of-work actors to deliver training, there was no guarantee that those who taught the course were properly qualified to do so. Perhaps the most discouraging aspect of the study was the responses received to the questions: 'Do you feel that voice care education should be offered on a BEd course?' and 'Do you envisage it being offered as part of the curriculum within the next five years?' Only 59 per cent felt that it should be included; others noted that it was an important issue but other issues had to take priority while several institutions stated that time and financial constraints made it impossible to offer students voice care and advice. Few respondents (23 per cent) felt that voice care education would appear on the curriculum within the next five years, with the general opinion being that there was neither enough time nor enough money available. If this was the response from institutions which offered teacher training as a three- or four-year BEd degree, it could be postulated that within a one-year Post-Graduate Certificate of Education (PGCE) time for voice care would be even more limited.

A similar lethargy seems to pervade other countries. In the USA there is widespread concern over the number of teachers who suffer from voice problems, but little evidence of any comprehensive preventative work (ASHA 1997). Indeed, the problem there is exacerbated by the often prohibitive cost of health care and the inability of teachers to sustain the high cost associated with voice therapy. As a result a number of teachers have had no other option but to resign from teaching. As Vilkman (1996) notes, in most countries it is very rare for a voice disorder to be accepted as an occupational disorder by insurance companies. This contrasts with, for example, the approach to prevention and treatment of occupational hearing disorders. This means that there is little financial compensation for teachers for sick leave, therapy or other treatment.

In Sweden an initiative by the University of Gothenburg in 1992 offered a voice course where university teachers were given weekly voice training in small groups (Ohlsson 1993) but this, like the University of Warwick's Open Studies programme for professional voice users (Comins 1995), is exceptional.

In 1993 over 200 teachers who had attended workshops or courses offered under the auspices of the British Voice Association, on voice care and development, were contacted and of these 100 teachers responded to a questionnaire (Martin 1994). The results of the survey showed that, while 83 per cent of the teachers had received no formal voice work while training, 98 per cent thought that this was an important part of formal training and should have been given attention. Sixty-six per cent of those who responded had experienced complete voice loss during their professional career and 98 per cent regarded their voice as an important professional tool.

Yet these results expose a professional paradox: many teachers appear to subscribe tacitly to the dictum that voice problems 'come with the territory'. There is a perception that vocal dysfunction is something to be treated as an occasional 'hazard' rather than attributing it appropriately to the effects of vocal abuse and misuse.

One reason for this may be the lack of impetus by the professional bodies to acknowledge the extent of the problem and possibly some professional ambivalence as to the seriousness of voice disorders, although the response from PAT would seem to signal a change. While there is research and anecdotal evidence of the link between teaching and vocal abuse and misuse, little evidence is emerging to suggest that resources are available for preventative professional training for teachers.

This is not to suggest that teachers would never experience voice problems if they were to have training; for a small number of vocally vulnerable teachers problems might still occur, but the numbers would be much reduced. As Sapir *et al* (1992) suggest, clinicians have long suspected that lifelong speech habits, such as the tendency to speak rapidly, excessively and/or loudly, may predispose to vocal attrition.

(Vocal attrition here refers to the 'wear and tear' of the vocal mechanism and to the overall reduction in vocal capabilities associated with acute or chronic abuse or misuse of the phonatory system). Mucosal lesions, muscle fatigue, voice disturbances and reduced pitch and loudness ranges are some of the symptoms of vocal attrition (Sapir, *et al* 1990).

1.11 THE IMPACT OF VOICE LOSS

The impact of a reduction in vocal quality (dysphonia) or voice loss (aphonia) on a professional voice user should not be underestimated. The World Health Organisation published the International Classification of Impairments Disabilities and Handicaps in 1980 (WHO 1980). They offer the following definitions for these terms:

> Impairment is defined as 'any loss or abnormality of psychological or anatomical structure of function'
>
> Disability is defined as 'any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner, or within the range, considered normal for a human being'
>
> Handicap is defined as 'a disadvantage for a given individual resulting from an impairment or disability that limits or prevents the fulfilment of a role that is normal, (depending on age, sex, and social and cultural factors) for that individual.

Gordon and Lockhart (1995) have considered how voice disorders would fit within these categories and have suggested the following examples:

> Within the category of Impairment, vocal fold palsy or vocal nodules would serve as examples.
>
> Within the category of Disability, dysphonia would serve as an example.
>
> Within the category of Handicap, a teacher with a voice problem would serve as an example. (p.151)

It is apparent that the range of voice disorders experienced by teachers fall into each of the above categories and as such may serve to underline the seriousness of voice disorders within the teaching profession. Smith *et al* (1997) support the view that

teachers are at high risk of disability from voice disorders and that this health problem may have significant work-related and economic effects.

In addition, consideration should be given to the distress experienced by individual teachers to episodes of voice disorders. Teachers report feelings of isolation, distress and accompanying periods of depression as a result of voice loss. Martin and Darnley (1996) report on the evidence of a teacher whose episode of voice loss made her feel as though she was 'shut in a box without any means of escape'

Despite the evidence that a voice disorder for a teacher can fall into any of the significant categories of handicap, impairment, disability and distress there appears to be little acceptance that a voice disorder is a 'proper' disorder, despite fulfilling the WHO criteria. Teachers continue to 'vocally strive' despite all available advice which indicates that, while temporary improvement may be achieved through voice rest or reduced vocal use, any long-term improvement must be as a result of voice therapy, or the introduction of improved vocal hygiene and voice production.

While it is difficult to identify why there is, or appears to be, a lack of concern about voice disorders within the teaching profession it is possible to advance two quite prosaic reasons for this. One reason could be that if teachers signal voice as a vulnerable area they may put their jobs at risk. Or is it that until their voice is unequal to the demands imposed by teaching, it has never been considered vulnerable or in need of training? If this last is indeed the case, then it must follow that knowledge of the factors which precipitate vocal abuse and misuse remain for the most part the 'property' of the specialist, unknown and unaired in the wider domain.

This perception would appear to be supported by the diary extracts which formed part of the Further Education extension studies course evaluation process for those students who took the Voice Studies course, some of whom became part of this study. As a brief commentary on this, the following selected extracts indicate the considerable, but not unexpected, knowledge gap that exists:

> '... a friend of mine called me on the phone and told me my voice was very husky and sounds deep. This was not the first time such comments had been

made; I usually ignore them. However since starting this lecture I became more conscious of what people are saying about my voice. I could not understand why my voice sometimes gets deep and husky`

Student ES1

`I now recognise how my voice is affected by: posture, maintaining a good posture ... helps keep voice quality good. ... I see more clearly now the connections between my voice and my general state of relaxation or tension.'

Student F6

` ... I am also conscious of my posture and the detrimental effect it can have on my ability to relax before speaking.'

Student ES3

'This short course on the voice has given me an insight into many of the pitfalls we can fall into as busy teachers in the FE sector ... the pains I had experienced on teaching practice were now relieved and demystified as I learnt that I was actually responsible in helping to make these changes to my lifestyle which are essential in order to protect my voice.'

Student F3

`I have discovered during this course how restricting and abusive tension can be. I found Rodenburg (1992) most interesting reading. I realise that I 'have taken habits on for protection' ... Now I would like to work towards reducing 'any useless tension, anywhere in the body that can constrict the freedom of the voice' '

Student F1

This final diary extract illustrates one of the major contributory factors in vocal abuse and misuse – tension and stress. Chapter 2 will look at the known sources of tension within the teaching environment, and how and why they affect the voice.

1.12 SETTING THE STUDY WITHIN A FRAME

As a result of the issues already alluded to in this chapter, it was considered important to explore the following issues in order to frame the study:

- The impact of the professional role on the teacher's vocal quality.

- The effect of a constellation of factors, such as physical health, mental health and environmental issues, on vocal health.

- The effect that the provision of increased knowledge of voice use, voice conservation and voice maintenance during training had on vocal health in the first year post-qualification.

- The impact on vocal quality of the transitional process from student to teacher/lecturer.

- What, if any, predisposing factors in a specific student population existed which could help predict future voice disorders.

- The vocal health of individuals at the end of their training and before they began to teach.

- The vocal loading and manner of vocal use of newly qualified teachers/lecturers.

1.13 SUMMARY

This chapter has shown evidence of the extent of voice problems within the teaching profession. The concern of voice specialists throughout the world regarding the teacher's voice has been recognised by the body of literature that exists on this topic. The calibre and extent of research that has been conducted offers persuasive evidence of voice problems world-wide within this professional group. The recognition that voice disorders experienced by teachers may properly be ascribed to the World Health Organisation's classification terms of handicap, impairment and disability is a powerful indicator of the significance of vocal health for this population.

While these factors may signal long-held concern at a professional level from voice specialists, and more recent concern from teacher organisations and within education, there is limited evidence of concern that reaches across political and organisational boundaries. The lack of regard for health and safety at work issues, the limited application of preventative voice work within teacher training institutions and the

modest anticipated provision for voice care education in the future do not appear to predict a positive outcome for improved vocal health within the teaching profession.

CHAPTER 2

Stress and the Effect of Stress

This chapter will look at stress in general and the physical effect of stress. A specific focus of the chapter will be stress within the teaching profession.

The link between voice, stress and tension will be examined. The chapter will illustrate the effect of stress on voice quality and in particular highlight the link between stress and vocal abuse and misuse.

CHAPTER 2

2.1 INTRODUCTION

This chapter will look initially at stress in general and the physical effect of stress. The chapter will then focus specifically on the stress experienced within the teaching profession. The link between voice, stress and tension will be examined in order to illustrate how the demands of the teaching role, with its attendant stress and tension, can affect voice quality as a result of the changes that stress imposes on the vocal mechanism. The link between stress and vocal abuse and misuse will be highlighted. The chapter concludes with a technical note that outlines the vocal process.

2.2 STRESS AT WORK

Powell (1997) suggests that work stress is the single most important cause of stress. He evidences a study of financial institutions in which 64 per cent of employers regarded excessive stress as the principal health threat facing the company. In 1999, the Department of Health reported stress at work reaching epidemic proportions. It was recognised as the biggest occupational health problem with up to 6 million working days lost a year and costing around £5 billion (Milne 1999). In a TUC survey of 8,000 health and safety union representatives, three out of four described stress as a major hazard compared with two-thirds in 1997 (ibid).

2.3 STRESS DEFINED

In any discussion of stress it is important to try to define what is understood by the term 'stress' and this in itself presents a problem, as Travers and Cooper (1996) attest. Tension, strain and pressure are words that may be used synonymously with 'stress', while stress may be seen paradoxically as both negative and positive. Stress affects everyone but not to the same extent. Stress is a necessary and essential part of human life and the result of interaction between people and their environment. Each individual has a unique response to stress; a certain level of stress, which is beneficial and stimulates one individual to perform well, may be perceived by another as too much, and as a result their ability to perform will be impaired. Conversely, for the individual who responds to stress positively, too little stress can reduce effectiveness and leave the individual listless and under-stimulated.

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Stress may therefore be described as a form of interaction between the environmental demands and the individual's ability to meet those demands, and it is then that physiological change occurs which has, both directly and indirectly, an effect on the vocal process.

2.4 PHYSIOLOGICAL RESPONSE TO STRESS

Stress may be seen as an adaptive response by the body to changes in the environment. If confronted by a man-eating lion, most individuals would be activated by an instinctive response either to turn and run away, or stand and fight. While evolutionary changes have made it less likely that individuals will meet many lions, the response to potentially threatening situations remains the same and the primitive body in a state of high alert prepares to use reserves of energy to 'fight or flee'

On occasions, however, the fight or flight response is triggered without the individual being fully aware of it, but the physiological response will have taken place none the less. Some of the physiological changes that occur as the body 'prepares for action', regardless of how dramatic or otherwise this action is, are listed here:

- the pupils dilate and the mouth goes dry
- neck and shoulder muscles tense
- the large skeletal muscles contract for action
- breathing becomes faster and shallower
- the heart pumps blood faster so that blood vessels dilate
- the liver releases stored sugar to provide fuel for quick energy
- digestion slows down or ceases
- the muscles at the opening of the bladder and anus are relaxed
- cortisol, adrenaline and noradrenaline are released

When the source of the threat is removed or resolved, the body returns to a stable state or homeostasis. However, in periods of prolonged stress individuals may not return to a homeostatic state and may continue to demonstrate many of the signs listed below:

- difficulty in swallowing

- aching neck
- backache
- muscle tension
- muscle pain
- fatigue
- frequent urination and diarrhoea
- less efficient immune system
- over breathing
- indigestion

2.5 THE EFFECT OF STRESS ON THE VOICE

The relationship between voice, emotion and physical state has been well documented from seminal work by Moses in The Voice of Neurosis (1954) to that of Andersson and Schalen (1998). In effect the voice is a very precise stress indicator. A rather obvious but pertinent example is the way in which an individual's mood may be judged on the telephone. There are no indicators other than the voice to help to identify mood, no facial expression, body posture or gesture, yet mood, emotion and physical state will be illustrated by the initial greeting. Energy levels, mood and physical health are reflected in the voice.

'Tears in his eyes, distraction in 's aspect A broken voice ...' Hamlet.

Many of the stress-induced physical changes which have been described above will have a significant effect on voice quality. Reviewing these physical changes and examining them in the light of the processes that affect voice, reveals a clear link between voice and stress:

- difficulty in swallowing leads to a fixed laryngeal position
- aching neck leads to tension within the internal and external muscles of the larynx
- backache affects the easy movement of the ribs
- muscle tension reduces the flexibility and muscularity of the respiratory process
- muscle pain leads to reduced volitional movement resulting in stiffness and loss of flexibility
- fatigue leads to loss of effective muscle function

- frequent urination and diarrhoea lead to dehydration and a consequent effect on the vocal folds

- a less efficient immune system leads to lowered resistance to upper respiratory tract infections and potential for infection within the larynx

- over breathing leads to a reduction in breath support and therefore a reduced phonation time

  - indigestion may lead to gastro-oesophageal reflux which will directly affect the vocal folds, causing redness and irritation

This very brief outline of the physiological changes that can occur through stress illustrates that stress may affect every aspect of phonation. These include breath capacity, muscle function, reduced lubrication of the vocal folds, changes within the lining of the vocal tract and the tissue integrity of the vocal folds.

2.6 PREVALENCE OF TEACHER STRESS

Given that work stress is reported to have reached a critical level within the work place (Milne 1999; Health and Safety Executive (H&SE) 2002) and in recognition of the effect of stress on the voice, it is important to examine the prevalence of stress among the teaching profession. In addition it is vital to acknowledge the extent to which the teacher's working environment contributes to teacher stress.

The prevalence of teacher stress is a world-wide phenomenon which had already been identified almost three decades ago. Estimations of the percentage of teachers experiencing high levels of perceived stress have varied from between 30 per cent in the United Kingdom (Dunham 1983) to 70 per cent in North America (Coates and Thoresen 1976).

Fletcher *et al* (1982) suggested that while teaching has always presented stresses and strains there could be little doubt that teachers were high on the list of over-stressed professionals.

In 1991, *The Independent* newspaper reported that:

The number of retirements due to ill health increased from 1,617 in 1970/80 to 4,123 in 1989/90, with a large jump in 1988 when the Education Reform Act brought in the National Curriculum.

(25th January 1991 as quoted in Travers and Cooper 1996)

Such was the concern about the level of stress experienced by teachers within the United Kingdom that the second largest teaching union, the NASUWT, commissioned a comprehensive study of teacher stress (Travers and Cooper 1993). The findings indicated that teachers, as compared with other highly stressed occupational groups, experienced lower job satisfaction and poorer mental health. Teachers were found to be reporting stress-related manifestations that were far higher than the population norms and of other comparable occupational groups. Travers and Cooper (1993) discovered that the major areas of job dissatisfaction were the job pressure factors of 'management/structure of the school' and 'lack of status and promotion'.

In 1999 the United Kingdom Government sponsored a helpline for teachers (Lightfoot 1999). Teacherline was expected to offer advice to a predicted 15,000 teachers each year. Launching the helpline, the then Minister of State for Education said:

' it is not a Government initiative because we put so much pressure on teachers but one which comes from the profession itself.'

The need for this initiative, irrespective of by whom or why it was set up, would seem to indicate that little has changed within the past three decades with regard to levels of teacher stress. This would appear to be confirmed by the award to a teacher of a quarter of a million pounds for a stress-related compensation claim (Owen 2000). About the same time the then general secretary of the NASUWT, Nigel de Gruchy, was reported to have said that the union was dealing with 120 stress-related compensation claims; he predicted that unless action was taken there could be thousands more teachers with a valid claim. (ibid)

Changes within the education sector in the United Kingdom, be it in primary, secondary or tertiary education, have been frequent and numerous and have contributed substantially to the stress experienced by teachers in the work place, (Coopers and

Lybrand Deloitte (1991); Evans *et al* (1994); Cains (1995). Wu's study (1998) confirmed this, reporting on 'changes in education in recent years, which have brought about tremendous pressures on teachers'

It is not within the scope of this study to itemise the changes or comment on the political, demographic, financial and social factors for these changes. It is, however, important to look at educational change in the context of the individual teacher working within this environment, and who is subject to the inherent tensions and stress that accompany change.

2.7 OVERARCHING OCCUPATIONAL STRESS

There are numerous sources of external stress but certain stressors overarch many occupations. Cooper (1986) summarises occupational stressors as:

- those intrinsic to the job – poor physical conditions, work overload, time pressures
- one's role in the organisation – role ambiguity and conflict, self-image in the job
- career development – over- or under-promotion, lack of job security
- relationships at work – with head of department, colleagues, students/pupils
- organisational structure and modus operandi – little participation, rule bound, poor channels for consultation

While these occupational stressors are non-occupational specific, they serve as a useful framework in order to examine changes within education in the United Kingdom and to note how many are applicable to the teaching profession.

2.8 OCCUPATIONAL STRESS SPECIFIC TO TEACHING

The researcher has used Cooper's framework to explore the following stressors with specific reference to teaching.

2.8.1 THOSE INTRINSIC TO THE JOB

2.8.1.1 Poor Physical Conditions

Many individuals continue to teach/lecture in space which is unsuited to the task, for example, in old nineteenth-century buildings converted for teaching but not designed specifically for the task. Classrooms may be poorly ventilated or not insulated against noise. In the UK there are currently 21,000 schools of which 4,000 are Secondary schools. The majority of these were built before 1980 and since then the new-build programme has been quite small, with approximately only 20 new schools per year. Since 1997 the programme has increased and there is a major programme of refurbishment planned over the next 3 years (/buildings).

There has been guidance on the acoustic properties of the teaching space since 1967, and there has been an awareness of issues such as speech intelligibility and guidance on acoustic reverberation, but many teachers still find the teaching space vocally unsympathetic and experience difficulties. Sound-field amplification (SFA), which has been used in American schools for nearly 20 years, was introduced to schools in the UK in 1997 with considerable success. (Canning *et al*, 1998).

2.8.1.2 Work Overload

Travers and Cooper (1996) showed that there are, on average, 27.5 hours in the teachers' week; of these 21.85 hours are spent with students. Six hours are spent on time-directed activities. Covering for absent colleagues can take almost 3 hours per week while the average time spent on marking is 3.96 hours. In total, 8.53 hours of schoolwork infringed on teachers' home life. These figures represent the average; there are many teachers who are far exceeding these hours, as the work of Evans *et al* (1994) demonstrated with respect to infant teachers, and as this current study shows with respect to Primary teachers and lecturers in Further Education (FE).

2.8.1.3 Time Pressures

Time pressures are very much part of the teaching day, with teachers attempting to cover a myriad of tasks, with limited time in which to complete them.

2.8.2 ONE'S ROLE IN THE ORGANISATON
2.8.2.1 Role Ambiguity and Conflict

The multiple roles expected of the teacher, that of teacher, counsellor, parent substitute, are very demanding, while some roles conflict when taking into account the interests of the pupil versus the interests of the school/college, or the interests of the individual versus the interests of the organisation. Travers and Cooper (1996) offer some personal comments from teachers in their sample, which are used here to illustrate this point.

'uncertainty about the degree or area of my responsibility'

'poorly defined schemes of work'

'unfamiliarity of the demands that I face'

'feeling that my training is not adequate'

'the lack of clarity concerning the teachers' role within the school'

2.8.2.2 Self-Image in the Job

The prevailing feeling within the teaching profession in the United Kingdom is one of low morale and poor self-image. Blunkett in his role as Minister of State for Education claimed 'there is ... too much poor or inadequate teaching' (1998). It is therefore perhaps no surprise to note that a survey published by the National Union of Teachers in January 2000 reported that most primary teachers say they feel demoralised, overworked and undervalued (Carvel 2000).

2.8.3 CAREER DEVELOPMENT

2.8.3.1 Over- or Under-Promotion

Under-qualified staff are often expected to take on posts of responsibility without training (Travers and Cooper 1996).

2.8.3.2 Lack of Job Security

The insecurity of teachers' jobs is well documented (Wanberg 1984). Despite the fact that there are currently many unfilled posts, posts are under threat. The closure and the amalgamation of many schools mean that redeployment and job loss is still a factor for many teachers.

2.8.3.3 Demographic Changes Affect Teacher Recruitment and Retention

Travers and Cooper (1993) reported in their study on the high proportion of teachers actively considering leaving the profession, or seeking alternative employment, or

premature retirement. In 1998 the Teacher Training Agency, in an effort to raise recruitment, introduced a £5,000 'golden hello' for mathematics and science trainees (Charter 2000). In 2000 the UK Government decided, perhaps influenced by the eight per cent drop in applications to training colleges from 1999, to pay £6,000 salaries to trainee teachers in order to encourage more graduates into teaching (Charter 2000). In the USA, Weiss (1999) suggested that the teacher population would change dramatically in the next decade where there would be the 'need to hire more than two million teachers to ... replace an ageing teacher workforce ready to retire and respond to the chronic attrition of new teachers that plagues American schools' (National Commission on Teaching and America's Future 1996). In 2001 the then head of OFSTED, Mike Tomlinson, commented on the situation regarding teacher shortages as being worse than he could ever remember (Woodward 2001).

2.8.4 RELATIONSHIPS AT WORK

2.8.4.1 Relationships at Work with Head of Department, Colleagues, Students/Pupils

Younger, less experienced teachers are often affected by loss of more experienced teachers who could provide a monitoring role. High levels of stress and anxiety affect relationships with colleagues (Travers and Cooper 1996). Lack of confidence in college standards creates anxiety. In August 1998 cross party MP's expressed alarm over standards in United Kingdom Further Education colleges (O'Leary 1998), a view confirmed by the current Minister of State for Education in her 2002 speech to the Association of Colleges.

2.8.5 ORGANISATIONAL STRUCTURE AND MODUS OPERANDI

2.8.5.1 Little Participation, Rule Bound

The abolition of local authority control for FE colleges in 1992 in the United Kingdom resulted in management changes. Government objectives such as increasing growth in student numbers, improving levels of student retention, raising levels of achievement and improving efficiency have been difficult for some colleges to achieve and present problems for those working in such institutions, (Wallace 2002). FEFC ratings and changes in academic practice present challenges and difficulties for staff, who can then become disillusioned. Staff often feel disenfranchised and unable to control change (Ainley and Bailey 1997; Wallace 2002).

2.8.5.2 Poor Channels for Consultation.

Poor channels for consultation are often the result of inadequate or inexperienced management (Travers and Cooper 1996).

The factors outlined above serve to signal just some of the occupational stressors which may impact negatively on the vocal health of the teacher. These factors mirror those of Kyriacou (1987) who suggested that, in order of magnitude of stress, poor motivation, attitudes and behaviour of pupils, poor working conditions (including resources such as equipment), time pressures, low status and conflict with colleagues are rated the highest causes of stress. Due to the link between the physiological effect of stress and voice all these external stressors will have an effect on the vocal health of the teacher.

These occupational stressors have been used to illustrate factors which it is felt would generally be perceived by most individuals as promoting negative stress. However, it is recognised that, for some individuals, occupational stressors which may be perceived by others as negative are seen as both demanding and stimulating and thus challenging, rather than threatening. These factors serve as the backdrop against which the issues of vocal abuse and misuse within the teaching environment are clearly silhouetted.

2.9 VOICE AS AN INDICATOR OF PHYSICAL AND MENTAL HEALTH

Voice, as has been noted, is a very critical indicator of both physiological and psychological wellbeing and as such offers a particularly acute and effective gauge of physical and mental health. In a study of psychogenic voice disorders, or PVD, Andersson and Schalen (1998) showed that persistent conflict situations related to family and work predominated as a factor precipitating this condition. PVD may be defined as a disturbance of vocal behaviour presenting with either aphonia or dysphonia without any structural laryngeal lesion or neurological disease to explain the disorder. This study supports the earlier findings of Aronson (1985) and Butcher *et al* (1993) who suggest that individuals who are involved in interpersonal conflicts and where they are unable to express or have to 'choke back' their feelings may be especially susceptible to voice loss.

Berry (2000) suggests that an individual arrives at 'their' voice through a combination of factors, namely:

What they hear: accent, early environment and position within the family

How they hear it: their interpretation of sound and their ear

Habit of speech: related to early speech patterns and physical make up

How they use it: their personality, self-image and experience

McCallion (1989) says:

'you cannot separate your voice use from the rest of you. The impulse to communicate vocally comes from and uses your whole person, not merely the vocal organs. And your whole person is affected in a mechanical or physical way by such things as your environment, your relationship with yourself and other people and your intention of the moment. And however your mechanical use is affected, so is your voice, which is an expression of yourself and what all of that self is doing.' (p.3)

For most individuals their voice is a valued and central part of their identity, whether this be their natural voice or indeed a voice that they have 'found' for themselves. Work by Allport and Cantril (1934) over 60 years ago demonstrated a link between personality traits and voice characteristics. Authors agree that the voice reflects emotional and personality characteristics of the speaker (Aronson 1990; Rodenburg 1992). Many of these factors are neatly parodied by D.H. Lawrence (1957):

When you hear it languishing

and hooing and cooing and sidling through the front teeth

the Oxford voice

or worse still

the would-be Oxford voice

you don't even laugh any more, you can't ...

We wouldn't insist on it for a moment

but we are

we are

you admit we are

superior.

As a cogent illustration of the link between voice and stress and tension, the following diary extracts are included as illustrative examples of the student experience. These extracts come from those students in the School of Post-Compulsory Education and Training, who had taken a voice care course as part of an Extension Studies Unit. A number of these students went on to be part of the study sample. The identifier ES has been given to those students who did not remain as part of the study, those students who remained with the study were given the F identifier. The researcher recognises the need for caution in 'taking diaries or journals to be entirely transparent unmediated windows on the world' Wallace (2002), but the common theme is notable.

'Very tired. Not enough sleep because of domestic problems (emotional upset) changes in voice quality – deep and harsh'
Student F1

'I noticed my voice tends to change at every emotional experience ... I noticed that when I felt indifferent to a situation, bored or tired it affected my voice'
Student ES10

'I have been aware of this (viz: tension in my shoulders) for a long time now but did not know the extent and effects of this tension on my posture, breathing, voice control, stress levels and the way I confront life generally'
Student ES2

'... What this change in emotion did to my voice was quite incredible. I found myself with a very dry mouth and a loss of a feeling of control (vocally). When anyone did speak to me I found myself struggling to get an even tone to my voice. I realised that this was caused by the constant pressure and by a tenseness through my shoulder and throat area'
Student ES4

'I slept well and as a result I awoke less stressed and was able to tell a difference in my voice. It was clearer and less strained. The Voice class had made me

conscious of what is happening physically and shows the voice needs breath and a stress free body to support it and make it sound better'
Student F3

'... however as I was still tense from all the extra work I have had, this tension came out in my voice. Over abuse meant that I suffered with a hoarse, tired, stressed sounding voice which was deep and distant'
Student F3

'...This episode made me realise just how much stress can actually affect your breathing. My throat felt blocked and I was conscious that I couldn't swallow properly. I felt so asphyxiated that I thought I might explode'
Student ES8

Rodenburg (1992) offers a useful summary:

'Breath, vocal release, range, 'placing' resonance and speech are equally related. So when I speak of the voice I am really speaking of an entire physical network. Everything is connected to everything else, everything works with everything else' (p 20).

2.10 SUMMARY

In this chapter the physiological link between stress, anxiety and voice quality has been made more explicit. The chapter has offered a definition of stress and specifically referenced occupational stress. It has attempted to show the myriad ways in which stress may affect the response of individuals to stress both physiologically and psychologically. Factors inherent in the teaching role related to occupational stress have been explored in order to illustrate the way in which the professional role is implicated in vocal change. Individual reflections from students who have recognised the link between stress and voice quality have been used to offer a persuasive illustration of this fact.

2.11 TECHNICAL NOTE

This section offers a brief overview of the mechanics of voice production.

2.11.1 The Vocal Process

Voice – the process that changes silent thought into spoken word is dependent on three separate systems:

1. the respiratory system, responsible for the manner and pattern of breathing

2. the phonatory system, responsible for how sound is produced within the larynx

3. the resonatory system, responsible for modification of the sound

These systems are interdependent and have been adapted to work together in the process of voice production. It should also be noted that the relationship between head, neck and back and the positioning of the spine and pelvis will affect the rib cage and, consequently, respiration and voicing.

Voice requires a source of energy and a vibrating structure. The primary source of energy for the voice is air from the lungs which passes into the trachea and into the larynx. The larynx is the principal structure for producing a vibrating airstream, although the larynx, or voice box as it is sometimes called, is not a single structure but is, in fact, made up of nine individual cartilages, three large single cartilages and three paired cartilages. Despite the complexity and range of potential movement of these cartilages, in total the larynx is only approximately 5 cm in length.

The larynx is suspended within the pharyngeal cavity but attached by several extrinsic muscles to the hyoid bone to which the base of the tongue is attached. This link serves to maintain a dynamic association with the tongue. A high raised tongue position will cause a concomitant raising of the larynx.

The vocal folds are long smoothly rounded bands of muscular tissue which may be lengthened, shortened, tensed and relaxed, as well as opened and closed across the airway or trachea. The male vocal folds are between 15 and 20 mm in length, while female vocal folds are between 9 and 13 mm in length.

During normal breathing the vocal folds are wide apart, the air stream is unimpeded and air flows in and out of the lungs in regular phases. For speech, however, the vocal folds are closed to restrict the flow of air from the lungs, while at the same time air pressure

below the folds increases until the vocal folds are blown apart, releasing a puff of air into the vocal tract. This release of air results in a decrease of pressure below the folds and the elasticity of the folds, plus the reduction of air pressure, allows them to snap back into their closed position ready to begin the cycle of vibration again.

In normal vowel production, vibrations of about 135 cycles per second occur for men and about 235 vibrations per second for women. This difference in vibratory pattern results in the generally higher female pitch. The very specialised structure of the vocal folds, composed of four different tissue layers, each with different mechanical properties important for vibration, accounts for the amazing range and versatility of the voice. While the mucous membrane lining the vocal tract and the larynx is usually moist, mucous glands within the laryngeal ventricle lubricate the vocal folds and protect them in part from the effects of friction. However, dryness, caused by infection, smoke, tension and the heat generated by the speed with which the vocal folds are vibrating, will affect the voice, so it is essential that the vocal folds are hydrated by maintaining an adequate level of fluid within the body.

This periodic interrupting of the air stream produces a tone that is amplified within the pharyngeal, nasal and oral cavities and transformed through articulation of the lips, tongue and teeth, into meaningful speech sounds.

So for sustained speech, good breath support, plenty of air, flexible and relaxed respiratory muscles are needed, as well as healthy and flexible well hydrated vocal folds plus free and flexible uses of the resonators.

CHAPTER 3

The Demands of the Teaching Role

This chapter will look in detail at the demands imposed by the environment within which the teacher works and explore the effect that this physical environment has on the teaching voice.

CHAPTER 3

3.1 INTRODUCTION

Having outlined the link between stress and tension and its effect on voice, it is important to note the additional demands placed on the teacher's voice by the teaching role, which in addition to stress and tension may be seen to be potentially vocally abusive. It is important to recognise that, for many teachers, their vocal capacity is rarely up to the demands imposed by the environment.

This chapter will look in some detail at the demands imposed by the environment - aspects such as the physical environment in which teachers are working, the acoustics of the teaching space, and lecture theatre or classroom design. It will also explore the effect on the voice of teaching certain subjects and specific age groups. Finally, it will examine the communicative strategies employed.

Charles Lamb said:

> 'Nothing puzzles me more than time and space; and yet nothing troubles me less, as I never think about them' – (Lamb 1815, Letter to Southey)

Teachers would undoubtedly envy Lamb's insouciance as, for most teachers, issues of time and space are of considerable concern and anxiety. Time for most teachers is at a premium and space - the space in which they work and their 'own' space - impacts heavily on their working practice.

3.2 OCCUPATIONAL HEALTH ISSUES

Increasingly issues of occupational health are concerning the European Union. This is evidenced by the contents of their Council Directive.

> '... the employer shall have a duty to ensure the safety and health of workers in every aspect related to work'

It goes on to say:

'... the employer shall take the measures necessary for the safety and health protection and prevention of occupational risks .... provision of information and training ... provision of the necessary organisation and means. The employer shall implement the measures on the basis of general principles of prevention – e.g.

Avoiding risks

Evaluating risks

Combating risks at source

Adapting the work'

(Article 5-6, Council Directive 1989)

It is perhaps indicative of the increased importance attached to occupational health risks that these have been formulated. It is to be hoped that these EU directives will increasingly be the focus of the teaching profession in respect to vocal abuse and misuse within the work place.

3.3 NOISE LEVELS WITHIN THE CLASSROOM

Several studies, detailed below, illustrate the fact that noise is a very common and relatively well-recognised vocal health risk factor in teachers' working environments. Noise levels in the classroom place considerable demands on teachers' voices and thereby increase the vocal loading. The Department for Education and Employment upgraded guidelines for environmental design in schools (The Stationery Office 1997), but prior to that date there was no information on acceptable noise levels in school classrooms. Smythe and Bamford's study (1997), which looked at speech perception of four primary age hearing-impaired children in mainstream classrooms in the United Kingdom, suggests that there should be up-to-date information on classroom acoustics and hearing ability at all levels. They go on to suggest that improving acoustic conditions for hearing-impaired children in mainstream schools benefits the listening conditions for all children and as a result has advantages in reduced stress and vocal effort for teachers.

Truchon-Gagnon and Hetu (1988) reported that in kindergartens, noise levels were found to vary between 75 and 80 dB(A) and the peak levels were between 117 and 120 dB(A). In a classroom setting, as reported by van Heusden *et al* (1979) a limit of 40 dB

is frequently exceeded. Comins' (1995b) study found levels of between 66 and 72 dB(A) in classroom settings. It has therefore been estimated on the basis of classroom noise levels that the teacher's speech output varies between 58 and 79 dB(A) (Pekkarinen and Viljanen 1991).

Comins' study looked at the difference in noise levels in classes conducted by student teachers and those conducted by experienced teachers and found a significant difference in noise levels, 66 to 72 dB(A) for trainee teachers' classes as compared with 58 to 64 dB(A) for the experienced teachers' classes. This study also sought to identify triggers which caused teachers to raise their voices. As the study showed, four of the five trainee teachers raised their voices as the background noise of the children working and talking increased, but this in effect was counter-productive as the pitch of their voices and that of the children's were close. The male trainee had a lower pitch compared with the children while the experienced female teacher lowered her pitch instinctively. While this study was small in scale it does illustrate the potential for vocal abuse among newly qualified teachers in terms of vocal loading.

Vilkman et al (1998) looked at issues of ergonomic conditions and voice and suggested that the single and combined effects of humidity, output level and reading posture are related to the way in which prolonged vocal loading affects the voice.

The study was exploratory but seemed to suggest that there was a loss of ability by individuals to adapt their output level according to acoustic conditions, with a tendency to use a loud voice even in conversational speech. A high output level over a period of time is a recognised risk to vocal function in the long term. The findings of this study are significant if looked at in the light of the study by Comins (1995b) where an inappropriately high/loud voice was used during the school day.

3.4 WORKING ENVIRONMENT

Despite the recognition that noise levels in classrooms are vocally abusive, current thinking in education is to encourage children to verbalise ideas and explore language using speech to investigate their world, and develop social and personal skills. At all levels within education, group assignments and presentations are increasingly used to

examine performance. Even if background noise is not a problem, classroom and lecture room design is often ill thought out in terms of the demands that it places on the teacher's voice. Hargreaves (1984), commenting on the constraints placed upon teaching activity, cites material constraints such as school buildings, resources and class sizes. While his considerations are not of the effect of these constraints on the teacher's voice, it is interesting to note his comments:

> '... ever since the State included the large-scale provision and organisation of education within its orbit of influence educational change has been characterised not by a radical reform of contemporary arrangements in the light of a rigorous analysis of the educational and social whole but, in the words of Forster at the time of the 1870 Act, by an inclination to 'fill up the gaps' which could be identified in the existing range of provision using the minimum possible amount of expenditure. (p.69)

He goes on to say:

> 'as a result, teachers now work within widely variant architectural constraints; some in old 1870 buildings and others who are fortunate enough to be working in areas of expanding population, in modern open-plan units.' (Hargreaves 1984 p.69)

While acknowledging his comment that modern open-plan units may be favoured by teachers there is little to choose between them and older schools in terms of their acoustic profile and the vocal problems that they present.

3.5 ACOUSTIC ENVIRONMENT

The structure of buildings and the materials used inside them determine their ultimate acoustic quality. In general low ceilings, carpeted floors, covered walls and soft furnishings tend to 'dampen and deaden' sound and consequently absorb the voice. Hard surfaces such as varnished timber or wooden tiles, steel-framed windows and doors, large expanses of glass and bare walls tend to produce a bright, sharp and occasionally echoing sound.

Borrild (1978) defines a good acoustic environment as providing conditions in which noise is suppressed and useful sounds stand out clearly and are easily distinguishable.

The effect on the voice of the acoustic space is very important to the teacher. Primary school teachers often spend their whole teaching day in one space; teachers and lecturers in the Secondary and Tertiary sector find that they have to work in a variety of spaces. Within Tertiary Education, it is encouraging to note that the University of Greenwich has recognised the need to patrol its teaching environment and guidelines (Saunders 1999) have been issued, with regard to specifications of the teaching environment. This is particularly apposite as the University of Greenwich is housed in a listed building, the former eighteenth-century Royal Naval College, where there are limited opportunities to alter the acoustic environment. The guidelines document addresses a wide range of aspects, which affect the teaching environment, such as building regulations and spatial requirements. Contained within the spatial requirements is a section referring to the acoustic properties of the teaching space. The requirement is for acoustic reverberation times to be in the following ranges:

0.4 – 0.6 seconds	5,000 cubic foot capacity
0.5 – 0.8 seconds	10,000 cubic foot capacity
0.7 – 0.9 seconds	20,000 cubic foot capacity
0.9 – 1.1 seconds	50,000 cubic foot capacity

This document goes on to say that if these times are exceeded and carpet, curtains, furnishings and people do not provide sufficient damping, acoustic treatment should be adopted. This concern for the acoustic properties of the teaching space is very encouraging but it is important that, alongside this concern, teachers should be taught how to make most effective use of their voice in a specific space and be able to adjust certain vocal parameters accordingly.

The extremes presented by both the 'bright' and the 'dead' space are difficult for teachers. In interviews with teachers as part of this study, they reported that working in a difficult acoustic environment adds to the feeling of 'hard work' and that their voices are 'swallowed up' by the 'dead sound'. Many teachers try to push the voice with the result that there is an increased potential for vocal abuse and misuse. In the 'brighter' acoustic environment, teachers report that they are distracted by the reverberation of sound, which makes it difficult for both teacher and student to concentrate.

As Nabelek and Nabelek (1985) state:

> 'each sound is somewhat modified by the room and its perception is influenced by four factors –
>
> power of the sources
>
> distance from the source
>
> room reverberation
>
> background noise'

If, for the purposes of this project, the sound referred to by Nabelek and Nabelek is considered to be the voice, then the teaching voice will be influenced by the 'power' of the teacher's voice, their distance from the student/pupil, the reverberation of the room, and the background or classroom noise.

If all the factors work in sympathy then vocal output will be modified and optimised. If, however, as is very often the case, teachers are unable to modify their teaching voice to accommodate the acoustics of the space, then they will, for the most part, be attempting to counteract the effects noted above by potentially vocally abusive behaviours. These behaviours may include pushing or straining the voice or increasing the pitch.

3.6 MODIFICATION OF THE TEACHING SPACE

Acoustic modification of the teaching space is possible by inexpensive material adaptation. As has been noted in the previous section, the acoustic quality of a space is determined by the structure of the building and the materials used inside it. In general 'dead' spaces, where the acoustic properties have been dampened, should have all unnecessary material, such as carpets, notice- boards, books and wall hangings or curtains, removed. If the space is over 'bright' the introduction of absorbent material should be considered in order to reduce the reverberation of the sound.

Smythe and Bamford (1997) suggest the following ways in which background noise levels may be reduced in order to achieve improvement in acoustic conditions for hearing-impaired children:

- place physical and distance barriers between classroom and external noise sources
- think about noise tolerance levels

- introduce more formal teaching styles
- accompany teacher instruction with a cessation of classroom activity
- create a co-ordinated staff policy towards noise level tolerance

It is to be regretted that this study did not ascertain whether these measures, which would go a long way to effecting a reduction in vocal abuse and misuse, were considered within the institutions in which those interviewed were teaching. The researcher cannot offer any anecdotal evidence from teachers to suggest that any are in place.

Teachers and lecturers working in large spaces, such as lecture rooms and large classrooms, encounter problems related to the natural loss of sound over distance. For example, at a distance of 6 metres, sounds are only a quarter as strong as they were at a distance of 3 metres. At 12 metres they are only a little over a twentieth as strong as they were at 3 metres. For many teachers and lecturers the problems of teaching a class in a large space is one of attempting to 'reach' those at the back, without too much vocal effort. For many this is impossible, as the results from this study will clearly show, and the result is that they push their voice to reach the back, often failing to achieve contact and consequently losing the interest and attention of their listeners.

3.7 VOCAL LOADING

Edwards and Furlong (1978) note that: 'Whatever else he (sic) does the teacher will be talking for most of his (sic) working day.' either as the authors suggest, in small groups and with individual children or, as in most Secondary school classrooms, talking as a public performance. Not all this time, however, is spent in simple transmission. Dunkin and Biddle (1974) estimate that the proportion of time spent on explaining by teachers varies from 10 per cent to 30 per cent. In reviewing the findings from this study it will be noted that teachers reported that they spent on average 60 per cent of each lesson talking. Ogunleye (2002) reported an even greater proportion of lesson time, 80 per cent, spent in teacher talk across Further Education colleges, with student talk accounting for 17.3 per cent, and silence or non-event accounting for 2.9 per cent of the lesson. Ogunleye's findings mirror previous findings by Wragg (1973), whose study showed teacher talk accounting for between 73 per cent and 81 per cent of lesson time

in all subjects that were observed, except French and English. Findings from this study reflect a similarly high vocal loading from both Primary and Further Education sectors.

The extensive vocal loading imposed on teachers is not unexpected; what is perhaps more unexpected is the differences in the distribution of voice problems across the teaching profession. There is general agreement that those who teach physical education are at an increased risk of developing voice problems. (Smith *et al* 1997; Sarfati 1989; Unger and Bastian 1981) and more limited evidence to suggest that music teachers are particularly at risk (Fritzell 1996), with additional findings from Sarfati (1989) which suggested that language teachers and drama teachers are equally at risk.

One voice teacher who works with teachers experiencing voice problems, noted that in her experience, science teachers, modern language teachers and teachers of religious education appear to present with more voice problems than others. She ascribed the difficulty the teachers had to their inability to assume 'a protective mantle'. According to the teacher:

> 'They're fine in French and German but when they have to teach in English it all shrivels up and they're a different kind of person. It's very interesting.'

The teacher went on to say:

> '… that's why people like acting because they don't have to be themselves and it definitely happens a lot, 'cos I thought why is it that I get so many people with modern languages but time and again this is it. There is a rather different person there who can do it in French or German because they are wearing it like a protective persona as you say.' (Martin 1995)

3.8 THE IMPACT OF VOICE DISORDERS ON STUDENT/PUPIL LEARNING

While experts may disagree as to which subject areas appear to increase the incidence of voice problems for those who teach within them, what is not in question is the effect of a particular vocal quality on teaching effectiveness.

Waller (1965) talks of:

'the didactic voice ... the voice of authority and the voice of ennui. There is in it no emotion, no wonder, no question and no argument. It imparts facts. There enters likewise into the classroom voice the voice of command ... This tone of voice goes with a formalisation of all social relationships and a stereotyping of the words of command' (p. 229)

Edwards and Furlong (1978) highlight the synergy of what is said, how it is said and the social relationship in which the speech is embedded. They also suggest that even in the absence of hard evidence about what has been learned, the articulate teacher is likely to be judged effective. The teacher, because of their position as 'expert', will, they suggest, be expected to do most of the talking themselves and to evaluate what is said by the students. If this is the general view of the teacher's role, one which the results from Ogunleye's study (2002) and this study confirm, then gaining and keeping the attention of their listeners is an essential skill for teachers and one that a voice disorder could compromise.

The following diary extract from a student who completed the Extension Studies Unit on Voice Care, serves as a useful example of this point:

> 'Before attending this teacher training course my method in front of a class was primarily 'lecturing' for two hours at a time. I have radically changed my methods to a more student centred approach. This has the added benefit of relieving me from talking for prolonged periods of time and straining my voice. I have certainly noticed a difference in the energy my voice has available to it. My students also suffer less boredom from the monotony of a tired voice.'
> Student ES2

As this study demonstrates, many teachers find they are unequal to the vocal demands of teaching and as a result find that their ability to use their voice may limit their effectiveness in the classroom.

While the choice of words will convey more or less effectively the meaning to the listener, the way in which this is expressed will affect the impact the message has on the listener. The way in which the message is expressed is dependent on the different

parameters of speech, namely articulation, voice quality and vocal variety. Vocal variety and consistency of voice quality can, however, only be achieved if the teacher maintains a flexible and robust voice. Teachers and lecturers may be well informed about their subject and have good classroom management skills, but if they are unable to communicate this knowledge effectively to their students it will be to little avail.

The pitch of the voice often carries the emotional content of speech. Vocal pitch rises when individuals are excited or stressed. In the same way individuals may often 'lose their voice' when they are frightened or angry; they cannot do more than whisper. As with any other fearful or highly charged situation, the resultant physiological changes experienced by the individual will impact on the vocal mechanism. For example, as a result of changes in heart rate and patterns of respiration, the vocal folds are less able to move together easily and efficiently to produce voice at the level of the larynx.

The effect of vocal damage due to anxiety, stress or tension also impinges on the ability of the lecturer or teacher to control and take charge of the class. Changes in vocal quality such as reduced volume, lack of power, or a rasping quality will reduce the teacher's ability to control the class vocally, so they will need to work harder to regain control, thus further damaging the voice. Significant recent studies into the effect of a voice disorder on the ability of pupils to process verbal information found that vocal hoarseness compromised pupils' ability to recall words and draw target inferences (Morton and Watson 1999).

In order to achieve class control, teachers may often adopt a lower vocal pitch which they feel will give themselves more authority and status. While this may appear to be a pragmatic solution it is, in fact, not to be recommended. Under-pitching the voice in this way may damage the vocal folds and will limit the range that the individual can access, resulting in a limited and uninteresting vocal quality, with the resultant detrimental effects on class management already noted.

3.9 SUMMARY

Issues of stress and tension and their effect on the voice are highlighted in the previous chapter; this chapter has looked at some of the demands imposed by the classroom. It

has identified how vocal abuse and misuse may arise and how the physical space, noise and the work environment place an additional loading on the teacher's voice and as a consequence affects the communicative skills of the teacher.

As an illustration of the effect of environmental issues on the voice, the following extracts from the student diaries completed as part of the Extension Studies unit are included:

'Teaching at X college: Computer demonstration. I begin every design class with a computer demonstration. This is particularly difficult as I have my back to the class when using the computer. I also have to compete with the noise of the machine and cooling system above.'
Student ES3

'I am also now aware of how the décor of a room will affect my voice. Some rooms have very 'dead' acoustics that is the room absorbs sound easily. In such classrooms I will either try to pitch my voice slightly higher than usual or remove carpets, unnecessary notice boards or books to make the room 'brighter''
Student F6

'The rooms themselves are not very big but as it is hot the windows are open and there is a lot of background noise. This is from the main road outside and building work that is being undertaken. I was not prepared to do battle with a cement mixer.'
Student F8

'Teaching today was dreadful. I teach in a building in the centre of London ... You can imagine the dust and noise ... ... it is very hot today and because today Westminster Council who own and run the building have not yet switched off the central heating it was 'kindly' suggested by the secretary that I could use one of the upstairs rooms which had large open windows. It was a nightmare.

Six o'clock in the evening is still rush hour at this junction and I had to raise my voice above the fumes, dust, traffic and oppressive atmosphere.'
Student ES2

As has already been noted on page 52, the identifier ES has been given to those students who completed the Extension Studies Voice Care Unit but did not continue as part of the subject group. The F identifier refers to those students from the School of Post-Compulsory Education and Training who remained with the study.

CHAPTER 4

Materials and Methods

This chapter describes the research methodology adopted for the study, offers a rationale for the method of data collection chosen and describes the procedures employed to initiate, conduct and complete the study.

CHAPTER 4

4.1 INTRODUCTION

This chapter will look at the research methodology adopted for this study. It will examine the choices made in study design and approach, and offer a rationale for the way in which the research project was constructed and how the research tools were developed and used.

The chapter will also look at the research process, defining the design stages in detail. The methodology chosen with regard to the study design will be defended and supported by theoretical underpinning.

Decisions taken as to which methodological principles to apply to examine the research question and which methods to use to do so were influenced not only by philosophical views, but also often by pragmatic factors.

4.2 RESEARCH QUESTION

The research question 'Does care and development of the voice, prior to qualification, mitigate potential vocal attrition in newly qualified teachers/lecturers within their first year of teaching?' was chosen to reflect an interest in occupational voice disorders as experienced by teachers.

Teachers have been recognised as an at-risk group for voice disorders for a considerable time (Greene 1964) and have traditionally had a high representation in voice therapy clinics. World-wide epidemiological work and clinically-based studies suggest that teachers are at a greater risk of developing voice problems than most other occupational groups (Yiu and Ho 1991; Marks 1985; Fritzell 1996; Russell *et al* 1998; Morton and Watson 1998).

A specific focus of the research was to see if any causative relationship could be seen to exist between vocal change and the exigencies of the teaching role. Change in vocal quality will occur as a result of vocal abuse and misuse but may also occur as a result of emotion. Each individual has a unique configuration of the vocal tract which gives us a

distinguishing vocal quality. Mathieson (2001) describes this as an individual's 'permanent voice quality' and there is little that can be done to change this quality as it is the result of anatomical features of the vocal tract. It is, however, possible to introduce changes to the characteristic levels of pitch, volume and timbre of the voice through muscular adjustments of the vocal tract. These modifications are not often controlled, except, for example, in the case of an individual deliberately lowering the pitch of his or her voice.

Changes in vocal quality may more often be perceived by the listener as a result of emotion, when change in the degree of tension within the vocal tract and in the vocal folds occur. These changes may be manifested, for example, by alterations in pitch and loudness levels, breathy irregular voice quality and a narrow frequency range. It was the awareness of this close link between voice and emotion that influenced the choice of research methodology. In order to make sure that the impact of emotion in initiating changes in vocal quality was not ignored or wrongly attributed to vocal abuse and misuse, it was necessary to adopt both a positivist and an inductive research model in order to fully evaluate the hypothesis.

4.3 RESEARCH METHODS AND METHODOLOGY

A primary aim of this study was to establish whether early intervention by way of voice care and development work during teacher training could militate against pervasive vocal abuse and misuse within the teaching profession.

A secondary aim of the study was to gain a deeper knowledge of the demands of the teaching role with particular reference to this specific population. This information, it was hoped, would:

1. contribute to knowledge of the effect that these demands may have on their current and future vocal health
2. assess the implications of this for teacher retention
3. move the debate forward to encourage voice training for teachers in-post

As the project developed, the balance between what had been seen to be primary and secondary aims of the project was adjusted and both aims were deemed to have equal value in research terms.

The aims of the research resulted in the formation of the following hypothesis:
As a result of voice care and development work during their training, individual teachers/lecturers will experience reduced vocal abuse and misuse during their first year in teaching.

4.4 RESEARCH APPROACHES

As has already been noted, in order to consider carefully all the elements that might be shown to contribute to vocal change as a result of the exigencies of the teaching role, it was necessary to utilise two of the most predominant research models. These models, namely positivistic and interpretative research, are often seen to be opposing ways of making sense of social reality.

In order to prove or disprove the hypothesis, a positivistic scientific model was deemed to be most appropriate and, within this model, objectivity in inquiry would be central to the research design. This would mean that the research would be quantitative in orientation and the concern would be to measure and quantify behaviour in order to explain phenomena and the relationships between them.

In order to fulfil the requirements of this research model, methods of data collection such as surveys, structured interviews and questionnaires have generally been predominant (Hitchcock and Hughes 1989). There is also an expectation in positivistic research that an unbiased representative sample would be selected by the researcher (who would, in general, be expected to remain aloof and objective in any dealings with the sample group) and that the emergent data would be quantitative in nature. The advantage of positivism is that it provides an orientation to facts and natural phenomena (Beck 1979) which would meet the research requirements. This was particularly important in, for example, offering the necessary rigour required when undertaking the acoustic analysis of the subjects' voices.

Positivism is, however, seen as 'notably less successful in its application to the study of human behaviour' (Cohen *et al* 2000). Positivist forms of enquiry, which are concerned with the search for facts, do not engage well when dealing with data that is more intangible, such as the personal reflections of the subjects in this study.

In order, therefore, to make sense of the effect of factors such as emotion on vocal quality, an interpretative research model would offer the most relevant data. One of the major characteristics of the interpretative approach according to Hitchcock and Hughes (1989) is the first-person description of events and activities. As a result, interpretative research may be said to be open-ended and concerned with discussion of individual cases rather than with more general situations. In order to fulfil the requirements of this model there is a recognition that data collected through such research will be as a result of involvement by researchers with their subjects. This means that the research techniques would include the use of participant observation and unstructured or semi-structured interviews. The subject group could therefore comprise a convenience sample and the emergent data would tend to be qualitative in nature. A weakness of this approach is poor generalisability of the data.

In examining these different approaches and assessing the advantages and disadvantages of each, a decision was taken to use both positivistic and interpretative approaches to the study in question. Advocating a combination of approaches which could be used in order to achieve the most synergistic outcome was seen as acceptable. This was not simply in an attempt to balance any perceived weakness in either methodology but rather in recognition that distinctions between these methodologies should not be exaggerated and that the use of mixed method research design is generally accepted as appropriate in many disciplines (Cresswell, 2003; Tashakkori and Teddlie, 1998).

Despite the tensions that may exist between and within the two research traditions, both qualitative and quantitative researchers are concerned about the individual's point of view, although the latter would argue that their work is free of individual bias and subjectivity. It was hoped that the use in this study of different styles of research (each governed by their different sets of genres) would lead to a more rounded perspective of the individual's experience; in effect to understand phenomena through two different

lenses, reflecting both positivist and interpretive paradigms. The detailed semi-structured interviews, personal accounts, perceptual voice analysis and voice diaries would be supported by more remote empirical material, such as screening assessment questionnaires, acoustic analysis, voice record sheets and postal questionnaires, thus reflecting the description by Cohen *et al*, (2000) of the different traditions:

> 'Positivism strives for objectivity, measurability, predictability, controllability, patterning, the construction of laws and rules of behaviour, and the ascription of causality; the interpretative paradigms strive to understand and interpret the world in terms of its actors. In the former, observed phenomena are important; in the latter, meanings and interpretations are paramount.' (p.28).

Denzin and Lincoln suggest that the multiple methodologies of qualitative research 'may be viewed as a bricolage and the researcher as bricoleur' (1998 p.3). This, they suggest, allows the researcher flexibility in the choice of research practice.

> ' The combination of multiple methods, empirical materials, perspectives and observers in a single study is best understood, then, as a strategy that adds rigor, breadth, and depth to any investigation (Flick, 1992, p.194 in Denzin and Lincoln)

Qualitative research does not have a distinct set of methods that are entirely its own. The researcher is able to use a variety of empirical materials such as personal experience, interviews, semi structured interviews and unstructured observation so that the subject may be allowed to 'set the agenda' and thus preventing the researcher from imposing his or her ideas on what is being looked for. In this way the researcher may 'build' a complex and reflexive image of the world under analysis. Denzin and Lincoln (1998) suggest that qualitative research, as a set of practices, embraces constant tensions and contradictions. It is:

> ' ... many things to many people. Its essence is twofold: a commitment to some version of the naturalistic interpretive approach to its subject matter, and an ongoing critique of the politics and methods of positivism' (p.8)

For the purposes of this study, which sought to access data that not only offered measurement and analysis of relationships between causal variables not processes, in a

value-free framework such as, for example, the acoustic measurement of voice quality, but also data that would provide an interpretive understanding of the teachers experience, the use of both research methods was seen as appropriate.

Denzin and Lincoln (1998) suggest:

'qualitative research embraces its own multiple disciplinary histories, constant tensions and contradictions over the project itself, including its methods and the forms its findings and interpretations take' (p.7)

The researcher was aware that in the use of a qualitative approach to data collection a tension existed between the assumption that both researcher and 'researched' could report precisely, clearly and objectively on their own observations of the world and that these observations could be blended, thus allowing an accurate record of their own observations to be achieved by the researcher while uncovering the meaning brought to the experience by the researched. This position is now seen as less secure with Denzin and Lincoln claiming that:

'there are no objective observations, only observations socially situated in the worlds of the observer and the observed. Subjects, or individuals, are seldom able to give full explanations of their actions or intentions; all they can offer are accounts, or stories, about what they did and why'

(1998 p.24)

Grounded theory offers a rationale for theory that is generated and developed through the interplay with data collected during research projects. As a general methodology for developing theory, grounded theory studies, as with other ways of carrying out qualitative research, shares certain similarities such as the sources of data collection; interviews, documents of all kinds and field observations. Strauss and Corbin (1998) suggest that 'grounded theorists can utilize quantitative data or combine qualitative and quantitative techniques of analysis' (p.160)

The general methodology of grounded theory, as exemplified by the work of Glaser and Strauss (1967) provided a way of thinking about and conceptualising the data. Glaser

and Strauss (in Strauss and Corbin 1998) suggested that an important feature of a grounded theory is its 'fitness':

> ' A grounded theory that is faithful to the everyday realities of a substantive area is one that has been carefully induced from diverse data ... Only in this way will the theory be closely related to the daily realities (what is actually going on) of substantive areas and so be highly applicable to dealing with them' (pp. 238-239)

To succeed in the purposes of the study, already defined above, of accessing data that provided an interpretative understanding of the teachers experience and offered measurement and analysis of relationships between variables in a value-free framework, the researcher was aware that no single method would reflect the variety and reality of the sample group's experience. This therefore dictated not only the use of quantitative data but also the use of a number of interconnected interpretive methods to analyse the emergent data. In the analysis of the data collected, the researcher was mindful of a number of particular distinguishing features of qualitative data as described by Cohen *et al* (2000), which further informed the choice of the use of a qualitative approach to data collection and analysis of such data in this study area.

These are:

- people are deliberate and creative in their actions, they act intentionally and meanings in and through their activities (Blumer, 1969)
- the social world should be studied in its natural state, without the intervention of or manipulation by the researcher (Hammersley and Atkinson 1983)
- people actively construct their social world
- situations are fluid and changing rather than fixed and static; events and behaviour evolve over time and are richly affected by context
- events and individuals are unique and largely non-generalizable
- fidelity to the phenomena being studied is fundamental
- people interpret events, contexts and situations and act on the bases of those events
- there are multiple interpretations of, and perspectives on, single events and situations

- reality is multi-layered and complex
- many events are not reducible to simplistic interpretations
- we need to examine situations through the eyes of participants rather than the researcher (p.22)

Denzin and Lincoln (1998) suggest there are five points of difference between qualitative and quantitative research; uses of positivism, acceptance of postmodern sensibilities, capturing the individual's point of view, examining the constraints of everyday life and securing rich descriptions, and they offer an explanation of how these differences are manifested in research. While, as has been said above, both research traditions are concerned about the individual's point of view, the manner in which this point of view is accessed is determined by the politics of research. The use of a qualitative research approach in this study captured the subjects' perspective, allowed a closer appraisal of the specifics of particular cases and secured rich descriptions of the social world. In the decision to use quantitative materials within the research design, the researcher was encouraged by the work of Spindler and Spindler (1992):

> 'Instrumentation and quantification are simply procedures employed to extend and reinforce certain kinds of data, interpretation and test hypotheses across samples' (p.69)

Combining both research traditions in this study enabled the researcher to gain a more rounded perspective of the individual's experience, to understand phenomena through two different lenses, to challenge the predictive value of quantitative instrumentation by qualitative findings, thus permitting the study to reflect the feature of 'fitness' as described by Glaser and Strauss (1998), where the everyday realities of a substantive area are induced from diverse data.

4.5 RESEARCH DESIGN

The initial focus of the research had been to collect data from student teachers within the Primary Education sector only. Extending the sample population to allow for comparison of two groups within the education sector was influenced by the access afforded by the School of Post-Compulsory Education and Training to their PGCE

students. This access therefore permitted inter-as well as intra-group analysis to be undertaken.

Despite this amendment the design methodology was not altered; this continued to be based, because of the nature of the issues to be addressed, on what would most accurately described as a combination between a broadly interpretative and positivist approach.

4.6 REVIEW OF METHODOLOGICAL APPROACHES

The particular research methods and research tools used will be examined below and a critical analysis will be undertaken to take account of the distinction between each research model, as briefly discussed above. It is important to do so as both have been used in this study for particular and valid reasons.

In assessing the design and methodology selected for this project there was a need to consider the best possible methodology which would yield the most fruitful results.

4.7 POSITIVISTIC RESEARCH

The use of quantitative methods as a feature of the positivistic paradigm allows concepts to be described in simple terms, which are operationalisable to a high degree of reliability. This was a particularly important aspect in terms of underpinning the study and evaluating the hypothesis. It thus had an important application for some aspects of the research.

Issues which quantitative data could address were:
1. Measurement of vocal change in terms of acoustic analysis and measurement
2. Vocal change in precise, measurable, objective terms over a period of time
3. Inter- and intra- group vocal changes which may be rated with precision
4. Multi-dimensional positioning analysis - creating a multi-dimensional model of the environment in which the teacher is working

This approach would allow for triangulation of some results and could offer a more robust defence of any facts that emerged from the study. In addition it had the potential

to allow for more confident generalisation of results when, for example, suggesting changes in future voice training provision for teachers and lecturers. The study sample was, however, small and to generalise from such a small sample might be inappropriate. An additional danger in adopting this approach might be that figures derived from the proposed questionnaires could be perceived as resulting from subjective judgements in many cases.

4.8 INTERPRETATIVE RESEARCH

Interpretative research methods may be less different from positivistic research methods than is assumed and when needed to supplement, validate, explain or reinterpret quantitative research findings, qualitative research may be used to support data collected from the same setting.

Denscombe (1998) suggests researchers attach meaning to things that happen and use language that is a product of their own culture, social background and personal experiences, while observation is conditioned by what the researcher already knows and already believes. With reference to this study it was important to consider these limitations as it would, for example, be possible to attribute undue importance to a series of comments reported by the subjects during the interview process and use these to unduly influence the research findings. This could occur because the comments reflected a particular bias or desire on the part of the researcher for them to be right, in order to further the aims of the research. Evidence that bias was not imparted may, however, be seen in the degree to which the findings went against the researcher's hopes for the outcome of the project.

As the subjects had to some extent self-selected, their previous vocal experiences could have unduly influenced their involvement. Hence their vocal experiences and later accounts or interpretation of events during their first year post-qualification had the potential to be biased. There was a need for introspection and constant vigilance in order to ensure reflectivity when assessing the extent to which previous professional experience and personal belief shaped the research hypothesis and research aims.

In seeking to confirm that the choice of an interpretative research model was appropriate for the study, a strong influence was that of Miles and Huberman (1994) who proposed core recurring features of interpretative research. These are outlined below and then specifically related to this study.

1. 'Qualitative research is conducted through an intense and/or prolonged contact with a 'field' or life situation, typically situations reflective of the everyday life of individuals.'

In this study the experience of a number of individuals within a particular setting, that of the classroom environment, was examined over a period of a year.

2. 'The researcher's role is to gain an holistic overview of the context under study.'

This study examined the experience of a number of aspects of the subjects' experience of the transition from student to teacher, not only that pertaining to the classroom setting.

3. 'The researcher attempts to capture data on the perceptions of the 'subjects' through a process of attentiveness and empathetic understanding.'

For the study to provide a rich source of reliable data, there was a need to build a relationship between researcher and researched. Relationship building was seen as imperative to the research process and was done through teaching, interviews, voice questionnaires and personal contacts.

4. 'The researcher may isolate certain themes and expressions that can be reviewed with informants but should be maintained in their original forms throughout the study.'

The use of information from the recording and transcription of the semi-structured interviews, the voice diaries and the voice record sheets was seen to provide this.

5. 'A main task is to explicate the ways people in particular settings come to understand, take action and manage their day to day situations.'

The use of information from voice records, diary extracts, and the semi-structured interviews was seen to provide this.

6. 'Many interpretations of the material are possible, but some are more compelling for theoretical reasons or on grounds of internal consistency.'

It was hoped that the researcher's theoretical background and previous research experience would allow for differentiation and consistency in evaluating the material.

7. 'Relatively little standardised instrumentation is used at the outset.'

The research proposal reflected a moderate use of instrumentation, due to the nature of the research and the amount of compliance required by the subjects.

8. 'Most analysis is done with words. Words can be assembled; sub clustered broken into semiotic clusters. The words can be organised so that the researcher can contrast, compare, analyse and bestow patterns on them.'

The researcher was familiar with this method of analysis through previously published research.

As has already been recognised, the aims of the study could not be met through the use of only one research model. The multiple evaluative processes required by the study were attuned to the approach propounded by Miles and Huberman (1994), who suggest that:

> 'in the actual practice of empirical research, we believe that all of us - realists, interpretivists, and critical theorists   are closer to the centre with multiple overlaps'

The work of Kaplan (1973), Gheradi and Turner (1987), Greene, Caracelli and Graham (1989) and Salomon (1991) informed the decision-making process. Cohen *et al* (2000) offered confirmation that the decision to examine both qualitative and quantitative data was correct:

> ' ... the search for understanding (of the subjective experience of individuals) focuses upon different issues and approaches them in different ways. The principal concern is with an understanding of the way in which the individual creates, modifies and interprets the world in which he or she finds himself or herself. The approach now takes on a qualitative as well as quantitative aspect.' (p.7)

The work of Cresswell (2003) further supported this choice as Creswell (*ibid*) suggests four strategies to guide how the research is conducted. These are:

- Implementation of the data collection. Qualitative and quantitative data may be collected concurrently or sequentially

- The priority given to data collection and analysis (This priority is determined by 'the interest of the researcher, the audience for the study, and what the investigator seeks to emphasise' p212)

- The theoretical perspective can be explicit or implicit

- The integration of data. At what point the qualitative and quantitative information are merged.

This final point reflects the much earlier work of Merton and Kendall (1946) when they said:

' ... they (social scientists) are concerned rather with that combination of both (qualitative and quantitative data) which makes use of the most valuable features of each. The problem becomes one of determining at which points they should adopt the one, and at which the other, approach.'

Sections 4.7 and 4.8 have offered an overview of factors which influenced the choice of methodology before beginning the research. The following section reviews the research process.

4.9 SAMPLING CRITERIA

In undertaking this research, official permission to do so in the target community was sought initially and access was sanctioned by the University of Greenwich. Having decided to survey a particular subject group, namely newly qualified teachers within their first year of teaching, the ones to be studied had to be selected. In view of the fact that the University of Greenwich had both the School of Post-Compulsory Education and Training and the School of Education, random or probability sampling (Cohen *et al* 2000) from the University population had a strong attraction. That approach would have afforded an opportunity to generalise the final results to a wider population.

It was not possible to collect data from everyone in the category being researched. As such, it was instead important to select as a sample population a number of teachers-in-training during one academic year and it was then necessary to hypothesise that those individuals would form a representative cross-section of people within the specific study 'population'. Selecting a probability sample raises bias, although bias is minimised in a random sample and there was a difficulty with this with regard to sample size and age distribution. The University of Greenwich has historically attracted mature students or those re-training for a second career. In terms of gender distribution, a greater number of women than men train as Primary school teachers, so it was recognised that the sample population might be unduly weighted towards women rather than men.

In reviewing this concern, it was felt, however, that such a sample would fairly reflect the current population within Primary teaching, although recognising that there could be some potential bias regarding the population within the Further Education sector for example, in terms of ethnicity. This could impose some limitations on the ability to generalise from the research findings.

It was decided, therefore, to select a sample accessed from individuals from both the School of Education and the School of Post-Compulsory Education and Training who attended voice care and development training provided by the researcher. The sampling process would therefore allow some of the key features of qualitative sampling to be fulfilled. These features are, according to Kunzel (1992) and Morse (1989), as cited in Miles and Huberman (1994), that qualitative samples tend to be purposive and not random. The choice of subjects would reflect the purpose of the sampling strategy, which was to sample within each professional group and to try to get as much information as possible about a shared experience.

While it might not be possible to select cases because they were expected to be particularly illuminating (Focused sampling), it was hoped that the sample would provide an opportunity to sample information-rich cases that manifest the phenomenon intensely but not extremely, thus fulfilling the criterion of Intensity sampling (Kunzel 1992; Patton 1990).

An additional consideration with regard to the sample group was the voluntary aspect of the research design. No financial incentive would be offered to those taking part; what would be offered was training to offset any voice problems which might be experienced during the subjects first year post-qualification and to insure against subsequent voice problems. For those who were invited to be part of the control group, no training would be offered until the end of their first year post-qualification. As a result, that could encourage those individuals who had already experienced voice problems during teaching practices to volunteer to be part of the sample and thus the group might contain individuals who were already vocally challenged. It could additionally compromise the desired random nature of the research group as in effect the subject group could be seen to self-select. This limitation of the study design is alluded to in future chapters. The sample accessed is acknowledged to be a non-probability sample.

4.9.1 ETHICS

In looking at the research design in advance, the researcher was very aware of the need to take into account the effect of the research on participants. Ethics has been defined as:

> 'A matter of principled sensitivity to the rights of others. Being ethical limits the choices we can make in the pursuit of truth. Ethics say that while truth is good, respect for human dignity is better, even if, in the extreme case the respect of human nature leaves one ignorant of human nature.'
>
> (Cavan, 1977 p.810)

There was an awareness that the question of ethics in research is a highly complex issue, where at all times the welfare of the subjects should be uppermost. The researcher was concerned to follow ethical principles for conducting research with human participants and so those guidelines outlined in both the British Sociological Association's Guidance Notes (1996) and the British Psychological Society's Code of Conduct (2000) were implemented where appropriate. Some aspects such as covert research, relations with, responsibilities and obligations towards sponsors and/or funders were not applicable. However, where guidelines were explicit and related to consent, access and acceptance,

deception, debriefing, protection of participants, confidentiality and withdrawal from the investigation, they were closely followed and all requirements were met.

The research was seen to be in a highly sensitive area. Respondents disclosed accounts of their professional and personal experiences in research interviews. The process often involved individuals revisiting situations charged with negative emotions. The narratives were often deeply revealing and from the information disclosed could have been potentially damaging to both the participants and others who might have been unaware of the research and therefore unable to give their informed consent. There were comments critical of employment contexts, so there were 'political' sensitivities to consider as well. For that reason the researcher made considerable efforts to ensure that the anonymity of individuals and institutions was preserved. All material related to the research, such as completed questionnaires and tape-recordings were kept in a secure file by the researcher. Due to the sensitive nature of the information disclosed in the semi-structured interviews it was agreed with all participants that all tape recordings would be wiped once the research had been submitted and deemed acceptable.

Each individual was invited to ask about and to receive feedback on any aspect of the process at any time. Each individual signed a consent form (Appendix 6), which explained how the material that they had provided would be kept or if necessary disclosed only to the researcher's supervisors. In order to protect the subjects, all identifiers which could have betrayed their identity were deleted.

The researcher also made a decision in advance that should an individual, who was experiencing vocal problems that in the researcher's opinion required professional intervention present as a control, then it would have been necessary ethically for the researcher to have considered the needs of the individual for voice therapy or voice care above the needs of the study. In the event this did not occur and so this ethical decision did not have to be made.

It should, however, be noted that the subjects were offered an opportunity to leave the project at the end of the training period which was, in effect, on completion of the Extension Studies Unit for those from the school of Post Compulsory Education and

Training or on completion of the Voice Care and Development training day for those from the School of Education. It was also made clear that participants could leave at any time in the research process, irrespective of a previously expressed commitment to the study. In order to ensure transparency and access to the researcher, participants were given the researcher's address and telephone number.

It could therefore be said that those who continued were genuinely interested in helping and being part of the project, as there was no further or obvious gain for them once the training had been completed, apart from the opportunity to learn more about any changes that occurred throughout the year in either their questionnaire scores or in their own voice quality.

However, it is recognised that there are some occasions on which researchers do not really have a great deal of choice when it comes to the selection of suitable cases. Denscombe (1998) offers the following examples: where a study is part of commissioned research and at times when events occur which provide the researcher with unique opportunities. Denscombe (1998) further suggests that qualitative researchers find it difficult to adhere to the principles and procedures of probability sampling for selecting their people or events.

The limited number of control subjects contained within the study was of concern, so a decision was taken to access additional respondents. This would offer a more balanced and reflective account and would additionally guard against any undue bias in the sample population (all subjects in the main sample were from the same academic year completing in 1998).

Grounded theory has been alluded to already in 4.4, in which the responsibility of the researcher was outlined; to interpret what he or she has observed, read or heard, and not simply to report the views of those studied. A feature of grounded theory studies is an explicit mandate to strive throughout the course of a research project, rather than through follow-up quantitative research, toward verification of the resulting hypothesis. Grounded theory methodology explicitly involves 'generating theory and doing social research [as] two parts of the same process (Glaser, 1978, in Strauss and Corbin 1998

p.159) A central feature of the approach is 'a general method of [constant] comparative analysis' (ibid p.vii). Lincoln and Guba (1985) describe it as 'emergent and sequential' allowing the researcher to follow a particular path in which the sample emerges as an outcome of decisions taken earlier in the research; the research process is one of discovery.

This approach was one that met the needs of this particular study very well not only in support of a decision to access additional data on voice issues from the student cohort who completed their training in the summer of 1999, but also as a reflection of the sample groups which were experiencing different teaching contexts and patterns of professional behaviour. For those within the Primary school environment, teaching demands may appear to be very different to those experienced within the Further Education sector, yet it is the vocal challenges and the constellation of factors that contribute to vocal change that are of importance in this study not specific issues of curriculum delivery or comparative teaching demands. The vocal challenges experienced by newly qualified staff in both sectors, and the factors that contribute to vocal change; vocal load, physical and mental health issues, and environmental factors, as discussed below, justify the decision to compare and contrast the two sample groups. It was also important in the view of the researcher, to demonstrate the extent of vocal attrition along a continuum of teaching contexts from primary to further education.

4.9.2 VOCAL CHALLENGES EXPERIENCED BY BOTH EDUCATION SECTORS
Vocal Load
In lesson delivery, respondents from both groups reported limited periods during which they did not talk. Respondents from both groups reported talking for over 60 per cent of each lesson that they lead. Respondents from Primary Education reported a much more intensive teaching day with the accompanying vocal demands than those within Further Education. The less demanding student contact teaching timetables experienced by those respondents working in Further Education were, however, balanced by the considerable stress they reported due to the need to travel between sites.

Class Density
The number of children in a Primary class was as many as 35; for those in Further

Education fewer numbers may be in attendance but the size and mass of the individuals in what can be a relatively small teaching space, can often create the same feeling of density.

Discipline

Problems of discipline can be acute for both groups. Within the Primary education sector, teachers report problems of discipline due to disruptive behaviour, due to the emotional, behavioural and educational needs of the pupils, for example meeting the needs of children with special educational needs or English as a second language may create specific difficulties within the class. For those in Further Education, discipline problems are also an issue: reluctant attenders, individuals with behavioural and emotional problems or those who attend but do not want to participate can create similar problems in maintaining discipline. In addition the physical size of older students can be threatening and intimidating.

Mutuality or Isolation

Individuals from both groups reported genuine mutuality in the sense that staff members were dependent on each other for support, while other individuals became socially isolated from their colleagues. This was not limited to Further Education where it might have been expected due to the varying work practices, part-time contracts in a variety of locations with little time to establish relationships, but also in Primary Education, where some staff reported feeling isolated and additionally some respondents reported episodes of bullying by other staff members. Intensification of work meant that many respondents in both sectors had limited time in which to socialise with colleagues in the staff-room.

Stress

Stress was experienced by both groups as a result of policy and practice at different levels within the teaching environment. These levels, which could be described as resulting from government policy, (macro level) school/college policy (meso level) and teacher/lecturer practice and classroom factors (micro level) contributed to identified levels of stress within both sectors.

Mental Stress

Lack of job security was an issue of considerable anxiety and thus mental stress for many of those in Further Education. In Primary Education this issue was less frequently reported; however respondents reported issues regarding permanent contracts. For those within Further Education lack of ownership of rooms gave cause for concern, although this was less of a concern to those within Primary Education.

Environmental Factors

Limited attention to vocal hygiene was reported by respondents from both sectors. Respondents reported limited hydration, overheated rooms, little circulation of fresh air, and problems with the build and design of the teaching space, all creating problems with the room acoustic.

Effect of Aging on the Vocal Mechanism

There was little difference in the age range between both groups so respondents from both groups were similarly affected by age related changes.

4.10 DEVELOPMENT OF RESEARCH TOOLS

Having established the nature of the sample, a series of research questions was developed to inform the process of establishing what data was to be collected and how that would be done. The methods for collection of this data would need to fulfil the criteria required by both positivistic and interpretative research approaches. This would be achieved through surveys, structured interviews, objective measurement and questionnaires for the former. For the latter, a variety of techniques may be used for gathering information, including field notes, interviews, participant observation, diaries, audio recordings etc. Cohen *et al* (2000) suggest:

> 'there is no single prescription for which data collection instruments to use; rather, the issue here is of 'fitness for purpose'' (p.146)

The selection of specific screening assessment questionnaires, the voice record sheets, the first drafts of the postal questionnaire, the perceptual and acoustic measurements, the interview and voice recording schedule were derived from this general frame.

The choice of research tools, which are described in detail in the following sections, was as follows:

1. already published screening assessment questionnaires
2. the development of a voice record sheet
3. the development of a postal questionnaire
4. the choice of semi-structured interview questions
5. the development of a perceptual voice quality measurement scale
6. an acoustic recording of each subject and a tool to provide an objective measurement of each acoustic recording

4.11 SCREENING ASSESSMENT QUESTIONNAIRES

In choosing to use questionnaires as part of the research design, there was an awareness of the need for them to fulfil several basic criteria for evaluation purposes. Denscombe (1998) suggests that there are five basic criteria for evaluating a research questionnaire. These are that:

1. the questionnaire will provide full information on the particular topic
2. the questionnaire will provide accurate information
3. the questionnaire will achieve an adequate response rate
4. the questionnaire needs to adopt an ethical stance
5. the questionnaire needs to be feasible

The content and form of the postal questionnaire was influenced by the above criteria. There was also an awareness of the need to trial all the questionnaires that would be used, so that they would be fit for the purpose.

4.12 USE OF PUBLISHED QUESTIONNAIRES

Several published questionnaires, namely the Victoria Infirmary Questionnaire, the Hospital Anxiety and Depression Score, and the Social Adaptation Self-Evaluation Scale, were selected. In choosing this raft of questionnaires there were a number of factors which could influence individual responses. Particular consideration was given to the issue of confidentiality and the time it would take to answer all the questionnaires.

In order to be able to alert subjects in advance as to the time it would take to complete the questionnaires, ten questionnaires were distributed to a number of individuals whom the researcher was confident would not have previously been exposed to the material. As all were published questionnaires, speech and language therapists were specifically excluded from the group as this material could already have been known and used by them. The average time taken to distribute and complete all the questionnaires was 20 minutes, which included time for discussion where any additional explanation was necessary. This was not seen to be an unreasonable amount of time for the specific target group to spare.

The choice of specific questionnaires was made to reflect particular aspects of the vocal profile, vocal health and mental health of those participating in the study. In addition it was felt that the questionnaires would fulfil several criteria, namely:

1. the respondents would be willing to supply the answers voluntarily
2. the respondents would have information and knowledge on the question topic
3. the style of questions was appropriate for the target group
4. the questions required respondents to answer only about themselves

The choice of the Victoria Infirmary Questionnaire as one of the screening tools was influenced by the fact that it had been developed by the researcher and a colleague and subsequently published (Martin 1987). There was confidence that this questionnaire would productively access appropriate information. In using this tool, there was assurance that a rigorous trialling process had been undertaken prior to publication. Since publication the screen had been widely used and had attracted positive feedback and comments regarding ease of use, and fitness for purpose.

The choice of the Hospital Anxiety and Depression Scale and the Social Adaptation Self-Evaluation Scale were determined by an ability to balance the legitimacy of using such screening tools with the target population against the benefits in terms of the information these assessments would provide. Again there was confidence that no ethical boundary viz. a viz. the relationship of the researcher with the subject would be compromised by the use of any of these questionnaires.

In using a questionnaire as a means of accessing information certain disadvantages were recognised, specifically that questionnaires can be biased, they may also be limiting and arbitrary in terms of the information they access and may not discriminate information.

Despite the noted disadvantages associated with this method of data collection, questionnaires do have certain advantages. They allow issues of specific interest to be selected, they allow for retrieval of information from a particular population across topics, they are a way of obtaining broad and rich information, and they also permit the gathering of both qualitative and quantitative data from the same source.

4.13 VOICE RECORD SHEETS

In designing the Voice Record Sheets there was an awareness of the conventions associated with any document that adopts a questionnaire-type approach. Denscombe (1998) summarises these as follows:

1. ask only those questions which are vital for the research
2. be rigorous in weeding out any duplication of questions
3. make the task of responding to the questionnaire as straightforward as possible
4. pilot the questionnaire to see how long it takes to answer

Every effort was made to make the record sheets as concise and explicit as possible and the information that the sheet provided was easily accessible for evaluation. The view was taken that structuring the questionnaire so that it contained closed rather than open questions would better serve this aim. It would therefore provide information that would be of a uniform length and in a form that would lend itself to be compared and quantified. In addition there was an awareness of the time demands on participants so a view was taken that closed questions demand less effort from respondents and as such might encourage a greater degree of responsiveness.

The disadvantage of this approach was that respondents would not have an opportunity to supply information that reflected their exact vocal experience although the sheet included a comment section in which respondents were invited to express their personal experience in a more detailed way.

In attempting to offer an opportunity for some compromise, a decision was taken to instruct participants to identify every response that was applicable and in this way strove to allow respondents an opportunity to present a more individual profile. A questionnaire should ideally allow respondents to order their responses so that the data obtained may be better ordered and compared. Designing a questionnaire, which used a five-point scale, such as a Likert scale, would produce ordinal data, which would have offered a more robust analytical tool. While accepting that this would indeed have been more sound in design terms, there was no certainty that the data that was to be sourced from respondents could easily fit into this type of questionnaire design. There is a recognition that the approach adopted could be deemed less than satisfactory, in that the eventual voice record sheets offered more simplistic comparatives, namely, more, less, very, quite and never. This then left the respondents as the final arbiter when comparing their current vocal status to their previous vocal status.

In defence of this approach, there was a conviction that asking respondents to keep a record of vocal change in this way would encourage them to attend more closely to their vocal quality and to a number of different aspects which could additionally affect their voice. These included details of their working environment, their vocal quality, their physical state, their emotional state, their voice use in class, triggers which could be identified as affecting their voice and changes that they would make to maintain their voice.

The design of the voice record sheets was amended as a result of piloting the sheets. The final sheet was more user-friendly and had a more attractive visual layout, allowing for a smooth route through the questionnaire. In developing this instrument there was an awareness that it would also provide a useful clinical tool. This was confirmed and it has subsequently been published with minor amendments to reflect voice use over time in a range of voice patients (Martin and Lockhart 2000).

4.14 POSTAL QUESTIONNAIRE

The design of the postal questionnaire which was sent to a sample of students in a later cohort from those in the main study, took account of the conventions of questionnaire design which have been described above and the issues already discussed in this chapter

regarding the use of questionnaires in research design. In reflecting on the rationale for sending out a postal questionnaire there was an awareness of the conventions of questionnaire design as have been described above and the issues already discussed in this chapter regarding the use of questionnaires in research design. In using this as a research tool, there was a need to consider the additional limitations which postal questionnaires impose; postal questionnaires usually involve no previous contact with the respondents and there is no prior notification to the respondent of the arrival of the questionnaire. An additional concern was the historically low response rate to postal questionnaires. Denscombe (1998) suggests that social researchers will be lucky to get as many as 20 per cent of the questionnaires returned and with large-scale postal questionnaires a response rate as low as 15 per cent is not uncommon.

In attempting to maximise the response rate it was important to consider factors which could contribute to the effectiveness of the questionnaire. Strategies to maximise the response rate included many of those recommended by authorities such as Oppenheim (1992). These included using an official letterhead when writing to respondents, offering details of the purpose of the research and stressing the confidentiality of the questionnaire. Included with the letter was a stamped addressed envelope for the return of the questionnaire, a note of thanks in advance to respondents and an acknowledgment of the voluntary nature of the response and the time commitment required to complete the questionnaire.

All respondents had provided their name and address in response to the questionnaire and it was therefore possible to send each person a letter of thanks once the questionnaire was received. In that letter respondents were encouraged, should they so wish, to contact the researcher for details of the research outcomes.

The questionnaire was designed to encourage easy identification of the subject and the education sector in which the individual worked. There was additionally an attempt to allow the individual to scan the page without difficulty and for it to be user-friendly in appearance. Some modifications were made to the page design due to the trailling of the material with colleagues and the researcher's supervisors, who were asked to provide critical comment. There is inevitably a tension between the ability of the

questionnaire to provide a rich source of data for the researcher and the ability for the questionnaire to be completed quickly and without difficulty by the respondent. The ultimately high response rate to the questionnaire, of 72 per cent, encouraged the belief that the design had fulfilled the requirement of quick and effortless completion. Later treatment of the data gave evidence of the questionnaire providing a rich source of data.

4.15 SEMI-STRUCTURED INTERVIEWS

The decision to include semi-structured interviews in the research design was made as they were seen to offer an important and rich source of data. This decision was informed by the choice of an interpretative research model, where it is recognised that data is accessed through the involvement of the researcher with their subjects. A clear incentive was a desire to obtain material which provided a more in-depth insight into the topic, the type of detailed information that only an interview supplies.

The choice of semi-structured interviews was made (despite the need for respondents to address a clear set of issues and answer a number of questions), in order to allow the interviewee an opportunity to develop and elaborate on points of interest as they arose during the interview. In structuring the questions, recognition was given to the validity of the statement by Whyte (1982) that 'a genuinely non-directive interviewing approach is simply not appropriate for research'. A degree of flexibility in the order in which the topics were raised was allowed, as it was important not to sabotage the opportunity the interview presented to gain an insight into the experiences of the respondent.

Lincoln and Guba (1985, pp.268-70) suggest several purposes for interviewing, including:

- present constructions *of events, feelings, persons, organisations, activities, etc.*
- reconstructions *of past experiences*
- projections *into the future*
- verifying, amending and extending data

Silverman (1993) considers that interviews in qualitative research are useful for:

- gathering facts

- accessing beliefs about facts
- identifying feelings and motives
- commenting on what could be done about situations
- present of previous behaviour
- eliciting reasons and explanations

Some, particularly unstructured, interviews involve a set of assumptions and understandings which, as described by Denscombe (1983) and Silverman (1985), are as follows:

- There is consent to take part. The interviewee understands that the interview is a meeting intended to produce material that will be used for research purposes.

- The interviewee's words can be used by the researcher at some later stage and the talk is likely or very likely to genuinely reflect how the interviewee feels. There is a need to be aware that some interviewees may 'seek to please' in their responses.

- The agenda for discussion is set by the researcher.

In recognition of these assumptions, these aspects were made clear to the sample group before the interviews and permission was gained to use material from these interviews in the research document. The first two points also raise issues regarding not only the 'contract' between researcher and subject but also the ethical principles in research, regarding the subjects' 'right to privacy' Diener and Crandall (1978) describe privacy as having three different perspectives which are: the sensitivity of the information being given, the dissemination of information and the setting being observed. The first two perspectives have already been considered in 4.9, but the third perspective, that of the setting being observed, was of importance, as some interviews would be conducted in an individual's home. The researcher was very aware that any interviews conducted within the home setting were in effect by invitation of the subject and that the very sensitive nature of this interview setting must be respected.

As with the points discussed above in relation to the postal questionnaire design and the voice record sheets, so with the semi-structured interviews. The selection of questions

to ask the subjects was informed by the nature of the overarching issues which were to be addressed in the study; these related to vocal quality and changes experienced during the first year post-qualification. Key issues to be explored were those related to the factors that are known to affect vocal quality, namely, physical health, mental health and environmental factors. The questions were designed to be non-threatening and were open-ended to allow the respondent to expand on their response. The use of a semi-structured interview format allowed for changes in the ordering of the questions or for a reduction in the number of questions asked. It was predicted that on occasion a question might already have been answered through the spontaneous narrative of the respondent.

The interviews would be conducted in a variety of settings, either at the researcher's home, the individual's home, or at the University of Greenwich. Such was the importance attached to this aspect of the research that no stipulation was made as to location and the interviewees' wishes were deferred to. There was, however, an awareness that the setting should afford privacy and non-interruption. Mindful of the notion of power being perceived as residing with the interviewer in the interview situation (Scheurich 1995, Kvale 1996), the choice of location was left to the individual respondent and was done in order to contribute to a more equitable balance of power within the interview setting; it was considered that the respondent would, in effect, be more in control within their own home setting. It was hoped that, as a result, the respondent would be more willing to contribute openly if there was 'ownership' of the setting.

The decision to record the interviews in their entirety was taken as it was felt that this would produce the most complete record of what was said. The interviews would be recorded on a Sony cassette tape-recorder, with external microphone. This decision was taken with the knowledge that there would be certain consequences of using a tape recorder. Those would be, according to Hitchcock and Hughes (1989), that 'the interviewer will have to manage the inevitable formality and structure that the introduction of a tape recorder will bring to the situation'; it was further recognised that 'The researcher must never play down the possible effects which the presence of a mechanical recorder can have upon what people say and the way that they say it'

Hitchcock and Hughes (ibid) do, however, acknowledge that the effects will depend on the relationship the researcher has with the interviewee. It was decided that the relationship between researcher and respondents was such that being tape-recorded would not substantially alter their responses, although it was recognised that in such a situation, power still generally resides with the researcher.

4.16 PERCEPTUAL VOICE ANALYSIS

In choosing to evaluate voice quality through the use of a perceptual tool, there was a recognition that the number and variety of perceptual voice schemes, some of which are country specific, would mean that reliable description of voice quality would be difficult. Perceptual voice quality evaluation is deemed a core skill for speech and language therapists but it is agreed that perceptual rating of voice quality is a difficult task. However, for the purposes of the study, perceptual voice quality evaluation was a critical factor in allowing voice quality change over time to be measured.

No published perceptual voice quality evaluation scheme currently available appeared to address all the needs of the study. Adaptation and modification of one of the three main schemes in use in the UK was undertaken in order to provide an assessment tool for the study. This process is described in detail in Chapter 8 but outlined here. Ten components of vocal quality were identified on which to assess each individual. These components were selected as they mirrored those components that would be used by clinicians to assess vocal characteristics and in their all-encompassing nature were seen as providing a robust framework. A five-point graded perceptual rating scale was designed where A was designated as meeting the vocal quality needed by a professional voice user and E was designated as evincing vocal qualities which caused the expert listeners strong concern.

This rating scale was initially used in order to assess ten voice recordings and it was decided that the rating scale needed further refinement in order to achieve a more precise record of vocal quality. As a result a modification was made to the scale and it was decided to provide a further tool in order to allow the listener to make a further judgement within each category by the selection of a plus (+) or minus (-) rating. 'Minus' would indicate evidence that the features within each category were of

increased severity that edged the overall vocal quality nearer that of the rating below. 'Plus' indicated evidence of an overall vocal quality that edged the quality towards the category above. The choice of this additional rating allowed a greater degree of refinement in terms of the rating scale and was seen to offer the opportunity for a more precise analysis of vocal quality.

4.17 ACOUSTIC ANALYSIS

Perceptual voice quality ratings are deemed to complement and substantiate instrumental voice quality measurements (Hammarberg *et al* 1986; Hillman *et al* 1997). It would therefore be essential for the study to use an acoustic evaluation procedure in order to support the perceptual results and allow for triangulation of results.

At the research design stage, access to one of two pitch analysers had been assured but when they were required for data analysis this proved not to be the case. One pitch analyser was unusable due to a lack of maintenance and would have needed extensive repairs, the other machine was the property of another organisation and a decision was taken to restrict access to the equipment to those individuals employed by the authority. An approach was made to use an alternative analysis programme at another university, but this was not available due to the pressure of student bench time and the involvement by a member of staff in a major Court case involving the use of the machinery to provide voice recognition evidence. An alternative analysis system was generously made available by a colleague at University College London and this computer analysis system SFS/WASP Version 1.0. www.phon.ucl.ac.uk/resource/sfs/wasp.htm owned by Mark Huckvale was introduced. In order to process the acoustic recordings through this system with the help of the expert listener, bench time was generously granted by the department of Human Communication Science, at University College London.

All these research tools were designed to extract data which would be used to examine the hypothesis which was brought to the study. The way in which the data was collected will now be addressed.

4.18 DATA COLLECTION

Section 4:10 described the tools used to collect data; the process of data collection is described here. Data was collected from a sample group of trainee teacher/lecturer students. Participants, those who were prepared to take part in the project as either subjects or controls, were sought from the University of Greenwich School of Post-Compulsory Education and Training and from the School of Education. The research proposal was presented to the Programme Committee at the School of Post-Compulsory Education and Training (PCET) in February 1998, and at this meeting it was suggested that an Extension Studies unit could be made available for one of the study groups. Discussion with the Head of the Primary Education course resulted in the acceptance of a proposal to run three all-day workshops for students after they had completed their training.

Participants, both subjects and controls, from the School of PCET were accessed through the agency of all PCET tutors, to whom a letter of introduction and explanation was sent (Appendix 1). Participants, both subjects and controls, from the School of Education were alerted by their Head of Department and through posters put up on their notice-boards.

As a result, 30 participants from the School of Post-Compulsory Education and Training and 42 participants from the School of Education agreed to attend the voice course and/or workshop. Course attendance did not commit participants to becoming part of the project as subjects, but an invitation to do so was extended to all those who attended. A more limited response was received from those students willing to act as controls to the project. Eight students from the School of Post-Compulsory Education and Training and one student from the School of Education agreed to participate by acting as controls. Training after the end of the project period was offered to all those who agreed to participate as controls. Subsequent effort to recruit more students as controls through the agency of tutors failed.

No solid data is available which would have informed the researcher as to why it proved so difficult to recruit controls to the study. This is a limitation of the research and as

such is to be regretted. Reasons for the lack of response can only be speculated upon and it is on that basis that the following suggestions are put forward.

- No immediate 'reward' was offered to potential controls. Students would have to wait until the end of the research project for training and this may not have been a sufficient incentive for students to give up time to attend, particularly if the individual had not experienced any voice problems.
- Students who were coming to the end of their course at that time may have felt over-stretched by other more pressing study demands.
- Students may not have seen the promised reward of future voice work as relevant or needed, as at that stage their exposure to the demands of the teaching environment would have been limited to teaching practice.

Thirty students from the School of Post-Compulsory Education and Training attended the Extension Studies unit over a six-week period beginning in April 1998. Each week, two back-to-back sessions of two hours were held with 15 students in each session. Forty-two students from the School of Education attended the all-day workshops in June 1998, 16 students attended the first workshop, 12 attended the second workshop and 14 the third workshop.

While course delivery for both groups was different - the all-day workshops offered a much more highly concentrated approach to the topic - every effort was made to ensure that the content remained the same. Two differences were noted. One related to the requirement that, as part of the unit regulations, students from the School of Post-Compulsory Education and Training had to keep a Voice Diary. This asked students to note a number of aspects of vocal change that they experienced during the six-week period. The other difference related to the amount of individual practice afforded to each group, which in the case of those in Primary Education was more limited. Participants were invited to remain after the workshop to ensure that none of them had questions left unanswered.

The topics covered in the training sessions were those that had already been trialled in a number of INSET days run by the researcher throughout south-east England. These

study days had been evaluated by teachers and deemed appropriate to their needs. The course was described to participants as exploring the nature and origin of vocal abuse and misuse and the benefits of different coping strategies. It promised to encourage participants to reflect actively on the vocal demands of the college and school environment and to present explanations of the causes of voice problems in colleges or schools. Advice, strategies and skills for effective voice use, in addition to practical workshop sessions, were offered (Appendices 2 and 3).

The course intentions were to enable participants to respond to the varying demands of the college/school environment in the most positive and productive ways and to help participants use voice effectively and efficiently to minimise vocal abuse and misuse. An example of the lesson plan, content and handouts for a session may be seen in Appendix 4.

At the end of the training periods all the students were asked if they would be prepared to continue to be part of the research project. Twenty-one of the 30 students from the School of Post Compulsory Education and Training agreed to proceed; of the 42 students from the School of Education, 16 of the group agreed to proceed. Of those students who had agreed to be part of the control group, six students agreed to proceed.

Once the subject group had agreed to proceed, the next stage of the project involved a voice recording session, which took place in the recording studios of the University of Greenwich in June 1998. Each subject was given an instruction sheet, with a rubric which clearly explained the procedure and what was expected (Appendix 5). The use of the written instruction sheet was included as it was felt that this would ensure that each subject received the same instructions and would be able, if necessary, to review the instructions. As all of the sample group were completing either under-graduate or post-graduate training the researcher did not feel that it was necessary to assess reading ability before the task or to assess if reading out loud would present any difficulty for individuals.

The initial recording was done in a strictly controlled studio environment, under the supervision of the TV Unit manager, to ensure that the recordings met the strict acoustic criteria to allow for subsequent perceptual and acoustic analysis. Each subject had to state their name, produce three extended vowels and read part of a standard text, The Rainbow Passage (Fairbanks 1960). All voice samples were recorded on digital audiotape. The microphone used was an AKG 451 condenser microphone. The recorder used was a Sony PCM-800 Digital Audio Recorder 16 bit linear quantization and 48 Khz sampling frequency, equivalent to CD sound quality. Where subsequent recordings were made out of the studio the same AKG 451-condenser microphone was used with the addition of a CKI capsule windshield. The recorder was a portable rather than a fixed Digital Audio Tape-Recorder, namely a Portadat PDR 100 with a pair of HD25 headphones.

After the recording session, time was allowed for the completion of three questionnaires, The Victoria Infirmary Questionnaire, the Hospital Anxiety and Depression Score and the Social Adaptation Self-Evaluation Scale. Subjects were alerted in advance to the time that this process would take, and all agreed to continue. In order to allow individuals space to complete the questionnaires with a degree of privacy a large room with a number of tables was set aside for this purpose, with drinks provided.

The students were additionally asked to sign a consent form (Appendix 6) in which consent was given to use the information in pursuit of research. In return a guarantee was given to maintain confidentiality of all material relating to them at all times, only divulging it to the researcher's supervisors if necessary.

Each student was subsequently written to within the same week, both to acknowledge their help and to reiterate their expected future involvement in the research process. Contained within this letter was a request for a contact address as from September (with a stamped addressed envelope provided), so that the researcher could make contact. In addition it contained a request for a fortnightly voice diary to be kept, and if possible some personal details/impressions in note form of the first term of teaching. Participants were alerted to the proposed timetable for a further voice recording, which

would take place at a time convenient to each individual. In response to this letter ten replies were received which noted a change of address and offered some detail of the working environment. One student withdrew from the project due to pressure of work. Four voice diaries were subsequently submitted although only one diary had been completed consistently; this aspect of the study is discussed in more detail in 4.23.

In October a further letter was sent to all participants which reviewed details of the research process, confirmed that there were no changes to the requirements expected from participants, enclosed a further copy of the voice diary outline, and alerted recipients to the December voice recording.

On 1st December 1998, 33 subjects, 18 from the School of Post Compulsory Education and Training, 15 from the School of Education and seven controls were written to, to arrange a time and venue for the voice recording and interview. Anticipating that individuals might find it difficult to return to the University of Greenwich for a specific time, a time-table was included from which participants could select from a choice of three different time frames, morning, afternoon, or evening, on six separate dates. A stamped addressed envelope was included so that the participant could return the timetable. In response to this each participant was telephoned to finalise all arrangements. If the participant could not attend a recording session, the recording took place at the respondent's home. Although there had been an expectation of some loss of participation, more students than expected failed to respond. It is to be regretted that a more active engagement with those students who failed to respond was not undertaken as information detailing their reasons for failing to respond could have informed a future study. No solid data is therefore available but it is possible to speculate that student responses may have been affected by:

- Work pressures and the more immediate need to meet the demands of the current teaching role
- The time that had elapsed from committing to the project - being part of the research group may no longer have been seen as sustainable
- The timing of the recording – near to Christmas and at the end of a long term
- No energy or enthusiasm for any further time-sensitive demands/commitments

- The research may have been seen as part of a previous 'student life' and no longer relevant to their current situation

- The initial response may have been 'of the moment' and have been influenced by the group dynamic rather than properly thought through

- Failure to gain employment or a changed career route.

- In line with the ethical principles for conducting research, participants had been informed at the onset of the study of their right to withdraw at any time. As a result participants may have exercised their 'right to withdraw' without seeing a need to inform the researcher of their decision.

- Loss of correspondence or change of address

All those who did attend were written to, acknowledging their continued support.

The following table illustrates the response achieved.

Response to Second Voice Recording and Initial Interview

	Original	**Record and Interview**	**Interviews only**	**Total**
PCET	18	7	3	10
Primary	16	6	1	7
Control	7	1	1	2

Table: 4.1

As a result of the information gained from the semi-structured interviews, conducted at the end of the first term, in December 1998, a decision was taken to increase the number of interviews from two to three. Each participant would therefore be interviewed termly, during his or her first year in post. The reason for this change in project design was dictated by the amount of information that the interviews yielded. It was recognised that an opportunity existed to achieve a clearer definition of factors within the school or college which might be term-specific or incremental in nature and which would illuminate the research. It was also deemed important to capture data that could be forgotten if too long a time delay occurred between interviews.

Participants were therefore written to again in February 1999, asking for permission to conduct an additional interview at a venue of their choice. Contained within the letter

were the Voice Record Sheets, which have already been described. A stamped addressed envelope was again included to encourage a response.

All participants who remained in the study were contacted in March 1999 and a series of appointments at either the participants' place of work or at their home were made, where the semi-structured interviews were conducted. It should be noted that yet again participants were not alerted to the questions in advance of the interview.

In response to comments from those students interviewed at the end of the Spring term, an amended set of Voice Record Sheets was sent to participants in May 1999, along with a letter reviewing the process for the next interview and final recording session. These amended Voice Record Sheets are now included with some minor changes as part of the clinical material included in Martin and Lockhart (2000).

As with the arrangements for the recording session in December, participants were sent a time-table at the beginning of June asking for provisional dates which would suit them. A choice of attendance venue was offered, either at the University of Greenwich or at their home. In response to participants' comments regarding previous interviews, where some participants felt inadequately prepared in their responses, a decision was taken to send the questions to participants in advance of the interview date and this was included in the letter. A stamped addressed envelope was enclosed to encourage response. It was not evident that the answers supplied by the subjects were any more substantial than those that had been supplied in the previous interviews, but there was perhaps evidence of a more reflective response from some subjects. This is a fine judgement and not sufficiently objective for there to be complete confidence in this assertion.

A final recording and interview took place at the end of the academic year, during June and July 1999, for all those who remained in the study. As with the voice recordings completed in December, some participants could not attend the University of Greenwich and therefore the recordings were made at a place of their choice.

Of the 33 recordings for those taking part in the project, 16 recordings were completed in the television studio and 17 recordings were made out of the studio. Following the final recording, and in recognition of their effort over the duration of the project, each participant was given a small 'gift' in the form of a book token, although this was not part of the original 'contract' Where appropriate, all travel expenses were refunded and a follow-up letter of thanks was sent to all participants.

Due to concern about the limited number of control subjects contained within the study, and in an effort to guard against undue bias in the findings (all core subjects were from the same academic year), a decision was taken to access additional data on voice issues from the student cohort who completed their training a year later, in the summer of 1999. In order to match the make up of the core subject group, 59 questionnaires were sent to students from the School of Education and 30 questionnaires were sent to students from the School of Post-Compulsory Education and Training in February 2000. A response rate from this first mailing of 31responses from those who had attended the School of Education, and 16 responses from those who had attended the School of Post-Compulsory Education and Training, was augmented by a further ten and seven responses respectively, gained from a second mailing to non-respondents.

Where no response had been received within four weeks of mailing, a follow-up letter was sent. The number of responses, which achieved a final response rate of 72 per cent, was very encouraging.

All respondents were sent a letter of thanks, which included an open invitation for those who wished to know more about the research to write for information. Although no requests were received for information regarding the research, a number of individuals asked for advice on voice problems they were experiencing, to whom material was sent in the form of handouts or specific advice.

4.19 DATA ANALYSIS

A detailed account of the process of evaluating the material collected from the questionnaires, the semi-structured interviews and the analysis both perceptual and

acoustic on the voice samples collected in this first phase of the research is detailed in chapters 5, 6, 7, 8 and 9. This section will, however, offer an overview of the process.

4.20 ANALYSIS OF THE VOICE RECORDINGS

The voice recordings obtained in June 1998, December 1998 and June 1999 were analysed using both acoustic and perceptual analysis. Using both methods of analysis, quantitative and qualitative measurement respectively, allowed the use of these different perspectives to compare and contrast the material. An equal if not more important benefit came from the corroboration that the acoustic measurements proved to validate the perceptual findings. While this did not prove that the perceptual judgements were correct, in most instances it corroborated the findings. In adopting this process of triangulation as part of the research design there was an awareness that while methodological triangulation can provide corroboration of data findings it cannot prove that either the data or the analysis were absolutely correct.

4.21 QUESTIONNAIRES

The responses from the Victoria Infirmary Questionnaire, Appendix 7, were evaluated quantitatively. Each questionnaire was given an individual number and all the data was keyed into a PinPoint programme at the University of Greenwich's Kings Hill campus. A printout reflecting the number of yes and no responses to each question was then obtained.

Cross-tabulation was undertaken by assigning each question to a particular section which reflected past and current vocal health, general physical health both past and current, voice use, occupational demands, environmental factors, social habits, anxiety and stress factors, vocal status, voice care past and current, and medication.

In evaluating the responses, it would appear that subjects found the questionnaires easy to follow with very few instances of non-response, although a small number of respondents had not completed some sections of the Victoria Infirmary Questionnaire. For example, in responses to a question about the number of cigarettes smoked, two respondents had indicated that they smoked but had not ticked how many they smoked on a daily basis.

The responses from the postal questionnaires were evaluated quantitatively at the University of Greenwich's Kings Hill campus. Each questionnaire was given an individual number and keyed into a PinPoint programme.

In the case of the Hospital Anxiety and Depression Scales, the results were analysed quantitatively and a score awarded, as was the case with the Social Adaptation Self-Evaluation Scale. Both these questionnaires are point-in-time screening tests, which have a recognised and specific scoring system.

4.22 VALIDITY AND RELIABILITY - USE OF QUESTIONNAIRES

The questionnaires provided a rich source of data, which was accurate and comprehensive. It was considered that the use of questionnaires as a method of data collection in this study was warranted. The use of questionnaires was included in the research design to help develop a profile of those taking part in the study, which would reflect a number of different factors which are known to affect voice, namely physical health, mental health and environmental factors. These profiles would allow the identification of presenting vocal features, similarities and differences in the group, and vocal change over time. This material, taken in conjunction with other research methods, might help to determine what factors influenced vocal change during the year.

4.23 USE OF VOICE DIARIES AND VOICE RECORD SHEETS

Due to a lack of rigour in the use both of the Diary and the Voice Record Sheets as a recording device by the subject group post-qualification, their use as an additional source of data was not deemed to be sufficiently reliable. The material contained therein did not add significantly to the presenting data to use in other than an exemplary way. Analysis of voice use was pitched at group rather than individual level, in contrast to analysis of voice quality which was specifically focused on individual subjects.

4.24 THE INTERVIEW PROCESS

While every effort was made to avoid over-involvement or personal bias affecting the course of interviews, there were occasions on which this occurred due to professional enthusiasm when the responses took a particular or unexpected route. When analysing the responses every effort was made to exclude material which could be seen to be the

result of such a 'diversion'. However, it was important to recognise that, due to the focus of the interview questions related to voice use or voice conservation were raised and it was necessary for a response in the form of advice to be given. This illustrated the difficulty of separating the professional role from the researcher role and indeed the responsibilities inherent in the professional role precluded any other approach. In regarding the validity of using personal statements and narrative as a main source of data, the response of Wallace (2002) to this difficult epistemological question was noted: 'I am taking the stance here that subjective truths can be counted as knowledge'

As has been noted on page 106, a change was incorporated into the research design at a late stage; that of sending questions to the interviewees in advance of the final semi-structured interview. There was concern in case this approach would change the interview from one that was, within the constraints of the approach, reasonably spontaneous, to one that was more similar in nature to a structured interview in which a more formal question and response format is usual. It was noted, however, that the informality of the previous interviews was maintained, perhaps because of the relationship that had been formed and the continuation of an established pattern. The opportunity that the interviewees had had to study the questions perhaps afforded more considered and reflective responses.

The interviews, which had no proscribed length, but all came to a natural conclusion, fulfilled the aim proposed by Hitchcock and Hughes (1989) '... to provide for a greater and freer flow of information between the researcher and the subject' The subjects were always willing and eager to share their professional and often personal experiences in a very open and transparent manner; there was no resistance to any question on any occasion.

4.25 STRENGTHS AND WEAKNESSES OF THE METHODOLOGY

The intention here is finally to highlight certain points which relate to the specific nature of the study and support the decision to approach the work in a particular way. Rossman and Wilson (1984) suggest that linking qualitative and quantitative data may be done to:

- enable confirmation or corroboration of each other via triangulation

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- elaborate or develop analysis providing richer detail

- initiate new lines or thinking through attention to surprises or paradoxes, 'turning idea around'

In reviewing the design process, it was noted that the quantitative results obtained from analysis of the postal questionnaires, the Victoria Infirmary Questionnaire, the Hospital Anxiety and Depression Scales and the Social Adaptation Self-Evaluation Scale had, with the qualitative data, provided richer detail to the qualitative findings. The acoustic analysis of voice questionnaires allowed for triangulation of the results from the perceptual evaluation.

It would have been helpful to have more quantitative analysis of some results. It would have been useful, for example, to determine if there was any significance in the changed scores exhibited by some subjects during the course of the year on the Hospital Anxiety and Depression Scale and the Social Adaptation Self-Evaluation Scale. Although analysis of these responses was attempted, the results were compromised by the small sample population.

The difficulties inherent in such a small-scale interview study have already been acknowledged with reference to generalisability; it is difficult to know whether the responses obtained from those interviewed actually represent widely held views in the profession. The analysis of responses denoted levels of inter- and intra-group agreement which encouraged a degree of confidence that the responses could be seen to fairly reflect common experiences in the first year post-qualification.

The acoustic analysis of the voice quality of subjects was not compromised by the sample population and in the case of the responses achieved from the postal questionnaires the sample population was sufficiently large to allow for confident generalisation of the results.

4.26 REVIEW OF THE RESEARCH DESIGN AND METHODOLOGY

In reviewing the research design and methodology there is satisfaction that some common features of qualitative analysis have met the requirements of the research.

- materials have been sorted and sifted to identify similar phrases, relationships between variables, patterns, themes, distinct differences between subgroups and common sequences.

- these patterns and processes, commonalities and differences have been isolated and taken out to the field in the next wave of data collection.

- a gradual elaboration of a small set of generalisations that cover the consistencies discerned in the database has occurred.

- these generalisations have been confronted with a formalised body of knowledge in the form of constructs or theories.

There is also satisfaction that some common features of quantitative analysis have met the requirements of the research, which allowed the following to occur:

- findings have been interpreted with confidence.

- interpretations and findings have been based on measured quantities rather than impressions.

- correct analysis of relatively dense questionnaire responses has been undertaken.

- computer software has been used to present results in a succinct and effective way.

- the acoustic analysis undertaken was transparent, repeatable and objective.

The close link between voice and emotion influenced the choice of research methodology. It was particularly important to make sure that the impact of emotion in initiating changes to voice quality was not ignored or wrongly attributed to vocal abuse and misuse. Changes in voice quality occur as the result of emotion, when change in the degree of tension within the vocal tract and the vocal folds occur, leading to alterations in pitch and loudness levels, breathy irregular voice quality and a narrow frequency range. These vocal qualities could also present as a result of vocal attrition so the choice of research methodology and design must allow the precipitating and maintaining cause of vocal change to be clearly identified. For that reason the research methodology included both positivistic and interpretative research models.

In defending the choice of methodology and design, the use of mixed method research design is generally accepted as appropriate in many disciplines (Cresswell, 2003 Tashakkori & Teddlie, 1998, Howe 1985; 1988). Torres (2003) suggests that from a purists quantitative or qualitative research perspective, some may feel mixing cannot occur without compromising assumptions attached to the method (Lincoln & Guba 2000) but in his opinion these distinctions can be managed, creating stronger research and evaluation designs. Howe's analyses show that quantitative and qualitative methods are 'inextricably intertwined', not only at the level of specific data sets but also at the levels of study design and analysis. Guba and Lincoln (2000) have stated that there are times when mixed methods can make good sense. Greene and Caracelli (2003) acknowledge that in mixed method studies the research decisions were based not on the organising framework of a paradigm but rather on the nature of the phenomenon.

The choice of mixed method research allowed for the use of both qualitative and quantitative data collection and analysis in both a parallel and sequential manner (Torres 2003; Cresswell 2003).

The researcher accepts that because the term 'mixed method' focuses on the mixing of methods only, it does not deal with potential paradigmatic tensions between the research traditions. In this study, however, to paraphrase the words of Cohen *et al*, it was the aim of the researcher to:

> ' present normative and interpretative perspectives in a complementary light and (will) try to lessen the tension that is sometimes generated between them.'
> (Cohen *et al* 2000 p.45)

4.27 CONCLUSION: THE STATUS OF THE PROJECT

The focus of the work is seen as original in a number of ways and therefore fulfils that PhD criterion. To the researcher's knowledge no similar longitudinal study has been undertaken to examine and compare voice quality change as a consequence of occupational demands within these specific educational sectors. No previous evidence has been available to indicate the degree of change that occurs as a result of teaching, in the perception of newly qualified teachers'/lecturers' need for voice care and development, and voice conservation. In addition the work has generated new clinical

tools which are of use to the wider professional speech and language body. The study has been far-reaching in terms of the issues covered, some of which have confirmed existing research. The number of hours, for example, that newly qualified teachers are expected to teach and the number of hours of voice use experienced by Primary teachers and FE lecturers in their professional role mirrors previous studies. As far as the researcher is aware, no previous research has gathered personal material regarding the effect on voice use and voice maintenance of the professional demands within the first year post-qualification.

It is believed that coherence and continuity have been maintained and extended by the material that it has generated and which it is hoped will be available in a wider forum. In the following chapters more explicit examples of these assertions will be provided.

CHAPTER 5

Psychogenic Voice Disorders

This chapter will examine the aetiology of those voice disorders which have a psychogenic predisposition. It will examine whether vocal change experienced by those within the study could be attributed to a psychogenic voice disorder and will illustrate the way in which this was confirmed or not confirmed within the study sample.

CHAPTER 5

5.1 INTRODUCTION

This chapter will look at how far psychogenic factors that may predispose an individual to a non-organic voice disorder were present in the research sample participants. These factors, such as personality characteristics, emotional reactions to acute or chronic life stressors and emotional disturbances are all referenced as affecting the movement of the vocal folds through increased levels of intrinsic and extrinsic laryngeal muscle tension (Aronson 1990; Morrison and Rammage 1994; Andrews 1995; Oates 2000).

The group participated in a number of self-administered, point-in-time screening tests designed to assess levels of anxiety, depression and social functioning, both at the end of training and at the end of the first year of teaching. This chapter will describe the process and present the results.

5.2 AETIOLOGY OF VOICE DISORDERS

In referencing the aetiology of voice disorders, the terms organic and non-organic have historically been used to divide the causes of voice disorders into two separate sections. Despite the fact that these terms are by their nature somewhat non-specific, they make a useful differentiation between those disorders which are the result of pathological changes to the vocal folds (organic), and those that are not (non-organic). It should, however, be noted that even within the overarching term of non-organic there is some ambiguity, as some patterns of misuse can lead to organic changes. Morrison and Rammage (1994), for example, suggest that persistent voice use with an inappropriate laryngeal posture can lead to organic changes, which may lead to vocal fold polyps or nodules. Oates (2000) confirms this; by suggesting that the notion that psychogenic factors can contribute to the development of hyperfunctional voicing patterns is a common theme in major textbooks on voice.

5.3 FACTORS CONTRIBUTING TO VOCAL CHANGE

For the purposes of this study, the researcher was concerned to identify factors, both within the teaching environment and as a consequence of the professional role, that

might contribute to, or cause, vocal change. This vocal change, if it occurred, it was hypothesised, would most likely have a non-organic aetiology, using that in a way defined in previous work. Martin and Lockhart (2000) include the following in their definition.

5.4 NON-ORGANIC VOICE DISORDERS
5.4.1 MUSCLE TENSION DISORDERS
The primary cause of misuse and abuse, and in effect the primary characteristic of trauma to the larynx, is the over-, or hyper-adduction, of the extrinsic and intrinsic laryngeal musculature accompanied by excessive vocal fold tension. As a result of this excessive laryngeal tension, alterations to the mass, elasticity and tension of the vocal folds occur. Causative factors include:

Yelling, screaming and shouting

Throat clearing and coughing

Irritants such as smoking, alcohol and environmental pollution

Talking against a high level of background noise

Extended periods of voice use

5.4.2 PROFESSIONAL VOICE DISORDERS
This is where voice disorders result from the unequal task of trying to meet the vocal demands of the individual's role as a professional voice user with the vocal training received. A lack of ability to maintain effective use of voice in demanding circumstances will lead, inevitably, to vocal abuse and misuse, or phonotrauma.

5.4.3 OCCUPATIONAL VOICE DISORDERS
Similar to professional voice disorders, where voice demands are unequal to the task, but within this category, individuals may not have occupations which are designated as falling within the category of professional voice user, for example, dance teachers and teachers of lip reading. The vocal outcome of abuse and misuse will, however, be the same.

5.4.4 DISORDERS RELATED TO INAPPROPRIATE USE OF PITCH, SUCH AS GENDER DYSPHORIA

For individuals who feel that they have been born into a body of the wrong gender, the voice problem most immediately associated with gender reassignment according to Colton and Casper (1996) is that of inappropriate pitch. The voice does not, in the speaker's opinion 'fit' the changed persona or image, he or she is presenting to the world. In the case of a female to male transition this is managed through the use of male hormones. For the male to female transition, laryngeal surgery may be effective to raise vocal pitch.

5.4.5. PUBERPHONIA – THE USE OF PRE-PUBERTAL VOICE BY AN ADULT MALE

For some adolescent males despite normal laryngeal growth and the development of secondary sexual characteristics, voice mutation fails to occur and the individual retains his pre-pubertal voice. In the United Kingdom this is known as puberphonia, also called Adolescent transitional Voice Disorder (ATVD) and mutational falsetto in the USA and parts of Europe.

5.4.6 PSYCHOGENIC DISORDERS

This term is used to describe those disorders in which the disturbance to voice is non-physical in origin. The vocal folds are essentially normal in structure and movement and the aetiology is stress-or anxiety-related. A much fuller description is given in Section 5.5 below.

In using the framework of non-organic voice disorder, the researcher was aware that not every manifestation of non-organic voice disorders could be attributable, either directly or indirectly, to factors within the teaching role. Those disorders that relate to inappropriate use of pitch, such as gender dysphoria and puberphonia, for example, present as discrete areas of vocal change.

In reflecting on voice quality change over time, as experienced by those taking part in the study, both perceptual and acoustic analysis was undertaken, as is described in Chapter 8. It was, however, deemed important to attempt to offer evidence for any vocal change that had occurred and had been identified by the researcher and expert listener. This evidence would, without the benefit of supporting clinical evidence, such

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as laryngeal examination, have to rely on additional evidence from other sources. Self-reporting in diary and interview form, from those taking part in the study, was seen to offer such evidence. As has been noted in the previous chapter the device of self-reporting in diary form did not prove to offer robust evidence due to the lack of rigour with which it was collected. Additional factors, which have been noted to indicate a possible predisposition to voice problems, would also be considered.

In this chapter, factors that may predispose an individual to a psychogenic voice disorder will be examined. The following chapter will look at other non-organic voice disorders, such as muscle tension disorders, professional voice disorders, and occupational voice disorders, where a common factor emerges, that of damage to the vocal folds as a result of phonotrauma, or misuse and abuse.

5.5 PSYCHOGENIC VOICE DISORDERS

The term psychogenic is used to describe a non-organic voice disorder, where the disturbance to voice is psychosomatic in origin. In a psychosomatic voice disorder, the vocal folds are essentially normal in structure and movement, and the aetiology is stress- or anxiety-related, and/or a symptom of an unresolved internalised conflict of which the individual may or may not be aware.

Monday (1983) describes psychogenic voice disorders as 'a voice impairment without any organic lesion of the phonating system'. Other experts suggest that a psychogenic voice disorder may co-exist with a voice disorder that displays symptoms of vocal abuse and misuse. Morris (1999) identifies a spectrum of disorder from hyperfunctional to psychogenic, with a progression through different stages, symptoms, treatment strategies and management. At one end is the hyperfunctional, at the other, the conversion symptom of aphonia/dysphonia of various manifestations.

A number of authors (for example, Aronson 1990; Morrison and Rammage 1994; Andrews 1995; Colton and Casper 1996) all contend that personality characteristics result in increased levels of intrinsic and extrinsic laryngeal muscle tension. As examples of these personality characteristics, they cite aggressiveness, emotional reactions to acute or chronic life stressors, dysfunctional interpersonal relationships and

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emotional disturbances, such as chronic anxiety and difficulty in expressing negative affect.

In addition to clinical case studies (Morrison and Rammage 1994) there have been empirical investigations of the personality coping styles and interpersonal relationships of people with hyperfunctionally related voice disorders (Green 1989, Goldman *et al* 1996). Studies on the neurological control of the voice have also provided evidence for the likely role of emotion in vocal behaviour (Larson 1992). Group psychological profiles of individuals with non-organic voice disorders are similar to those reported for groups of people with organic voice disorders (White *et al* 1997). Studies show that patients with a voice disorder showed slightly higher levels of anxiety-related scores in comparison with other non-voice disordered outpatients (House and Andrews 1987; White *et al* 1997).

Those studies, however, were undertaken with individuals who had identified voice problems, so it could be suggested that the voice disorder was in itself a source of stress. The researcher was interested to note whether those individuals in the study who did not have any identified voice problems would demonstrate any changes in levels of anxiety and depression throughout the year. In addition, the researcher was interested to know what, if any changes might occur throughout the year in the level of social functioning of those taking part in the study. Measuring these aspects, both at the end of teacher training and at the end of the first year of teaching, would offer comparative data, although it was recognised that the resulting information might not provide sufficiently conclusive proof that any voice quality changes which occurred were psychogenic in origin.

5.6 SCORING FOR ANXIETY AND DEPRESSION AND SOCIAL ADAPTABILITY

Increased or decreased scores for anxiety or depression or social adaptability, would add important data to the personal profile of those taking part in the study. This additional data could also possibly provide an important link to subsequent vocal change and might underline the known relationship between stressors, such as life events and the onset of illness. As described by Holmes and Rahe (1967) these life

events can include bereavement, divorce or changes of work or home life; the final two life events listed are of considerable relevance to the subject group. Moos and Swindle (1990) suggest that stress responses such as anxiety and depression or physical symptoms are often the manifestation of chronic demands such as overwork, professional, family or personal worries.

5.7 SELECTION OF TEST BATTERIES

In selecting particular test batteries that would meet the requirements of the study, the researcher was limited to those which she was qualified, because of her professional clinical qualifications, both to administer and purchase. The selection of the Hospital Anxiety and Depression Scale (HADS) (Snaith and Zigmond 1994) and Social Adaptation Self-Evaluation Scale, SASS (Bosc *et al* 1997) was a judicious choice, as both test batteries were self-administered, point-in-time screening tests. The tests fulfilled the criteria of being available to a qualified and registered speech and language therapist, neither took too long to complete, they were easy to administer and while the questions were quite searching they were not overly intrusive. No individual evidenced any concern or resistance to completing these screening tests.

5.7.1 ANXIETY AND DEPRESSION

Anxiety and Depression were assessed using the 14-item Hospital Anxiety and Depression Scales (HADS) (Snaith and Zigmond 1994). The instructions ask respondents to read each of the 14 test questions and underline which of four replies supplied comes closest to how the respondent has been feeling in the past week. In completing the form, the respondent is not aware which questions are assessing the individual's level of anxiety and which their level of depression. A sample item for measuring anxiety is:

"I feel tense or 'wound up" with the following responses supplied:

 Most of the time

 A lot of the time

 From time to time, occasionally

 Not at all

A sample item for measuring depression is:

"I have lost interest in my appearance", with the following responses supplied:

    Definitely

    I don't take as much care as I should

    I may not take quite as much care

    I take just as much care as ever

Each of the test responses has a score of zero, one, two, or three, with a maximum score for the depression section of 21 and likewise for the anxiety section.

5.7.2 SOCIAL FUNCTIONING

The Social Adaptation Self-Evaluation Scale (SASS) (Bosc *et al* 1997) measures social functioning and in the view of the researcher, gave a more well-rounded and explicit picture of the individual's work, personal and family life. Added to the results from HADS, the responses offered a multi-dimensional picture of each respondent.

A sample item for measuring the individual's interest in their occupation is:

'How interested are you in your occupation'?, with the following responses supplied:

    Very

    Moderately

    A little

    Not at all

Each test response has a designated score, from zero to three, with a maximum total score of 60. A score of between 35 and 52 is deemed to be within a normal range. Bosc *et al* (1997) go further and suggest a profile typical of each score so that:

A perfectly adapted person would have a mean score of 49

A person integrated through his/her family relationships would have a mean score of 42

A person integrated through his/her work would have a mean score of 32

An excluded person would have a mean score of 25

A socially disaffected person would have a mean score of 22

No participant had a score of less than 36, which indicates that none was integrated through his or her work. Bosc *et al* (ibid) suggest that such a person would have little cultivation of extra-family relationships, some communication difficulties and is poorly informed about his or her milieu. Little curiosity and no enjoyment from the few activities he or she takes part in would be evidenced. The individual who is integrated through family activity has few extra-family relationships and little desire to progress; to challenge the 'givens' in his or her life is less likely than for a perfectly adapted person, but adherence to the group remains secure. He or she is respectful of others and anything undertaken will avoid any excess or intensity of feeling, with the exception of his or her heavy commitment to the family cell. The perfectly adapted person has a very important extra-family network. He or she draws satisfaction from it and continually seeks to develop it. He or she is interested both in cultural activities and in leisure. Such a person is very good at organising their personal milieu.

It is to be regretted that there was not an opportunity to match more closely these personal characteristics within the framework of the study. However it is of interest to note that out of the four individuals who had the lowest scores on SASS in the summer of 1999 (of between 36 to 39), only one was convinced that they would still be in teaching in two years' time. It would, however, be unwise to infer any link from this finding.

5.7.3 TEST COMPLETION PROCESS

The following table shows the results that were obtained from participants on both occasions that they completed the HADS and the SASS. One participant was only able to complete the tests on one occasion. The tests were completed at the same time as the initial voice recordings were made. They were presented to the participants along with the Victoria Infirmary Questionnaire for completion at that time. The participants were given verbal instructions as to the procedure and they were all offered help or advice by the researcher should any difficulty arise as to how to complete the forms.

Participants were not sitting alone at the table but while there were other participants sitting nearby they were not close enough to see other participants' responses. The structure of the test does not allow for the identification of individual scores, so participants were not aware of their own score, nor able to 'massage' the final results.

Completion of the SASS and HADS for a second time was done at the time of the final voice recording and interview session. On this occasion the tests were completed at whatever venue was used for recording, either at the individual's home or in a room near to the recording studio at the University of Greenwich. The same process was undertaken with the researcher available to remind participants of the process and in order to answer any questions that arose.

Results from the Hospital Anxiety & Depression Scale (HADS) and

Social Adaptation Self-Evaluation Scale (SASS)

Subject	Date	HADS (A)	HADS (D)	SASS	Date	HADS (A)	HADS (D)	SASS
P1	10/6/98	9	5	44	31/7/99	9	4	41
P2	10/6/98	9	6	45	27/7/99	7	5	49
P3	10/6/98	6	2	45	2/8/99	9	3	43
P4	10/6/98	5	1	51	27/7/99	9	8	42
P5	11/6/98	11	5	37	30/7/99	14	5	39
P6	11/6/98	5	2	45	8/8/99	2	3	49
P7	12/6/98	4	0	39	30/7/99	6	2	37
P8	12/6/98	12	5	42	26/7/99	10	5	36
F1	13/6/98	15	2	49	21/7/99	10	3	43
F2	6/6/98	7	2	43	21/7/99	9	5	42
F3	3/6/98	14	3	43	19/7/99	11	3	39
F4	6/6/98	5	6	44	28/799	5	5	45
F5	5/6/98	3	1	46	29/6/99	3	0	53
F6	4/6/98	9	2	44	26/7/99	7	6	43
F7	6/6/98	8	3	48	30/7/99	8	3	42
F8	6/6/98	9	3	51	30/7/99	8	3	48
F9	27/6/98	13	1	49	26/7/99	11	0	48
FN1	10/6/98	10	6	39	20/7/99	8	4	42
FN2	23/7/98	15	7	51	31/7/99	2	0	45
FN3	12/6/98	6	0	47				

Table 5.1

5.8 RESULTS FROM ALL ASSESSMENT SCREENS

5.8.1 HOSPITAL ANXIETY AND DEPRESSION SCALE

As has been noted the maximum score for each sub-group that may be obtained on the Hospital Anxiety and Depression Scale (HADS) is 21. The results obtained were divided by the researcher into four sections/bands and each was given a descriptive rating relative to the maximum score, so the rating was as follows:

     0 to 5   Low

6 to 10 - Moderate

11 to 15 - High

16 to 21 - Very High.

The following scores were obtained when the respondents <u>first</u> completed the screening tests:

<u>In terms of Anxiety</u>

25 per cent of the respondents had Anxiety scores in the Low band

45 per cent of the respondents had Anxiety scores in the Moderate band

30 per cent of the respondents had Anxiety scores in the High band

no respondents had Anxiety scores within the Very High band

<u>In terms of Depression</u>

80 per cent of the respondents had Depression scores in the Low band

20 per cent of the respondents had Depression scores within the Moderate band

no respondents had Depression scores within the High band

no respondents had Depression scores within the Very High band

In looking at the scores obtained <u>one year later</u>:

<u>In terms of Anxiety</u>

21 per cent of the respondents had Anxiety scores in the Low band – 4 per cent drop

63 per cent of the respondents had Anxiety scores in the Moderate band –18 per cent rise

16 per cent of the respondents had Anxiety scores within the High band – 14 per cent drop

no respondents had Anxiety scores within the Very High band

<u>In terms of Depression</u>

89 per cent of the respondents had Depression scores within the Low band – 9 per cent rise

11 per cent had Depression scores within the Moderate band – 9 per cent drop

no respondents had Depression scores within the High band

no respondents had depression scores within the Very High band

One individual only completed the screening tests on the first occasion, and given the small number within the group, it should be noted that the results obtained a year later were from 19, not 20, respondents.

5.8.2 SOCIAL ADAPTATION SELF-EVALUATION SCALE

In looking at the scores obtained from the Social Adaptation Self-Evaluation Scale (SASS) it should be noted that the normal range has been identified as between 35 and 52. Again the scores were given a descriptive rating relative to this normal range by the researcher and were divided into four sections/bands as follows:

35 to 40 - Low

41 to 46 - Moderate

47 to 52 - High

53 plus - Very High

The following scores were obtained when the respondents first completed the screening tests:

15 per cent of the respondents had scores within the Low band

50 per cent of the respondents had scores within the Moderate band

35 per cent of the respondents had scores within the High band

no respondent had a score within the Very High band

In looking at the scores obtained one year later:

26 per cent of the respondents had scores within the Low band – 11 per cent rise

47 per cent of the respondents had scores within the Moderate band – 3 per cent drop

24 per cent of the respondents had scores within the High band - 11 per cent drop

 5 per cent of the respondents had scores within the Very High band – 5 per cent rise

In looking at group changes within the year:

37 per cent of the group had higher Depression scores

26 per cent had higher Anxiety scores

68 per cent had lower Social Adaptation Self-Evaluation Scale scores

In looking at individual changes within the year:

25 per cent of the respondents, (four individuals) demonstrated significant negative changes on all three scales, with higher Depression scores, higher Anxiety scores and lower Social Adaptation Self-Evaluation Scale scores.

Five per cent of the respondents (one individual) had negative changes on Anxiety and Depression scores but had a minimal increase from 37 to 39 on the SASS, although this was still a low score in comparison to the rest of the group.

68 per cent of the group (13 individuals) had negative changes in SASS scores over the year which is, in the opinion of the researcher, a very high percentage.

5.9 CHANGES IN VOICE QUALITY

In looking for changes in vocal quality as a reflection of a potential psychosomatic voice disorder, increased scores of depression and anxiety, and/or lower social functioning scores, needed to be reviewed. These scores would also need to be cross-referenced to the perceptual voice quality scores awarded by the researcher and expert listener. The researcher reasoned that by looking at the results obtained, some tentative data might emerge, which could provide a link between voice quality changes as the result of psychosomatic voice changes. Alternatively the results could confirm that the voice quality changes were the result of abuse and misuse, experienced as a consequence of an individual's professional role. The following results were obtained.

Positive Voice Quality Change

Positive quality change	Anxiety score	Depression score	SASS score
F1	-5	+1	-6
F5	Same at 3	-1	+7
P3	+3	+1	-2
P6	-3	+1	+4

Table 5.2

Of those four individuals who showed positive voice quality change throughout the year:

2 showed decreased Anxiety scores – 1 Primary teacher, 1 FE lecturer

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1 showed increased Anxiety score – 1 Primary teacher

1 showed the same Anxiety score – 1 FE lecturer

1 showed decreased Depression scores – 1 FE lecturer

3 showed increased Depression scores – 2 Primary teachers and 1 FE lecturer

2 showed increased SASS scores – 1 Primary teacher and 1 FE lecturer

2 showed decreased SASS scores – 1 Primary teacher and 1 FE lecturer

Negative Voice Quality Change

Negative quality change	Anxiety score	Depression score	SASS score
F2	+2	+2	-1
F9	-2	-1	-1
P1	Same at 9	-1	-3
P2	-2	-1	+4
P4	+4	+7	-9
P7	+2	+2	-2
P8	-2	Same at 5	-6

Table 5.3

Of those seven individuals who showed negative voice quality change throughout the year:

3 showed increased Anxiety scores – 2 Primary teachers and 1 FE lecturer

3 showed decreased Anxiety scores - 2 Primary teachers and 1 FE lecturer

1 showed the same Anxiety score - 1 Primary teacher

3 showed increased Depression scores - 2 Primary teachers and 1 FE lecturer

3 showed decreased Depression scores - 2 Primary teachers and 1 FE lecturer

1 showed the same Depression scores - 1 Primary teacher

All the group, bar one, showed decreased SASS scores – 4 Primary teachers and 2 FE lecturers.

Consistent Voice Quality

Consistent quality	Anxiety score	Depression score	SASS score
F3	-3	Same at 3	-4
F4	Same at 5	-1	+1
F6	-2	+4	-1
F7	Same at 8	Same at 3	-6
F8	-1	Same at 3	-3
P5	+3	Same at 5	+2
FN1	-2	-2	+3
FN2	-13	-7	-6

Table 5.4

Of those eight individuals who showed the same voice quality score at the beginning and end of the year:

1 showed increased Anxiety scores – 1 Primary teacher

5 showed decreased Anxiety scores – 5 FE lecturers

2 showed the same Anxiety scores –   2 FE lecturers

1 showed increased Depression scores – 1 FE lecturer

3 showed decreased Depression scores – 3 FE lecturers

4 showed the same Depression scores – 1 Primary teachers and 3 FE lecturers

3 showed increased SASS scores – 1 Primary teacher and 2 FE lecturers

5 showed decreased SASS scores – 5 FE lecturers

5.10 VOCAL CHANGE – DISTRIBUTION

From the results obtained, several aspects are of interest. The first relates to the distribution of the two professional groups within the study with regard to vocal change. In the group that experienced negative vocal change throughout the year the distribution of Primary teachers and Further Education teachers was as follows: 33 per cent were FE lecturers and 66 per cent were Primary teachers. In the group that experienced positive vocal quality change 40 per cent were FE lecturers and 60 per cent were Primary teachers. In the group that remained the same, however, the majority, or

88 per cent, were FE lecturers. (At the beginning of the study, Further Education lecturers were 60 per cent of the sample group, n =12).

5.11 ANXIETY, DEPRESSION AND SOCIAL ADAPTABILITY – DISTRIBUTION

The second aspect of interest relates to the distribution of the two professional groups within the study with regard to changes in the scores for Anxiety, Depression and Social Functioning. Within the group that recorded increased Anxiety scores throughout the year, one was an FE lecturer while four were Primary teachers. Increased Depression scores were noted for three FE lecturers and four Primary teachers. Three FE lecturers and three Primary teachers recorded increased Social Functioning scores.

Within the group that recorded decreased Anxiety scores throughout the year, seven were FE lecturers and three were Primary teachers. Decreased Depression scores were recorded by five FE lecturers and two Primary teachers while decreased Social Functioning scores were recorded by eight FE lecturers and five Primary teachers.

Within the group that recorded unchanged scores for Anxiety, three were FE lecturers and one was a Primary teacher. Three FE lecturers and two Primary teachers recorded unchanged scores for Depression. None of the group recorded unchanged scores for Social Functioning.

In looking at the changes that occurred throughout the year, perhaps most significant is the decreased Social Functioning scores recorded by all but one of those whose voice quality was judged to have demonstrated negative change throughout the year. It is not possible to state that a reduction in the individual's social functioning was mirrored by a decline in voice quality. It is, however, significant to note that in this section all but one of the recorded SASS scores were reduced, in two instances, by a significant amount, namely six and nine points.

In looking at the perceptual evaluation that was made of the individuals in question, the researcher was concerned to note whether the qualitative comments might illustrate vocal qualities which are generally seen as a reflection of psychosomatic voice

disorders, such as intermittent or ongoing aphonia, dysphonia or 'whispering dysphonia' (White *et al* 1997).

The following table shows the changes in the scores recorded by the individuals from the end of training to the end of the first year of teaching. Also included is the perceptual evaluation that was made by the researcher and expert listener of the voice quality at the end of the first year of teaching.

Change in Scores and Perceptual Voice Evaluation in First Year

Individual	Anxiety score	Depression score	SASS score	Perceptual evaluation
F2	+2	+2	-1	Breathy Lack of support, Creaky
F9	-2	-1	-1	High-pitched, Tension Creak Some voice loss
P1	Same at 9	-1	-3	Very breathy Not in right register Tone – limited intonation Narrow pitch range
P2	-2	-4	+4	Low pitch Held larynx Intonation limited Loses voice Out of register ? Diplophonia
P4	+4	+7	-9	Continuous irregularity in vibration Creak Diplophonia Pitch breaks habitual No strain or tension
P7	+2	+2	-2	Speech Very low pitch at bottom of register Intonation
P8	-2	Same at 5	-6	Lower end of register Creak Tension a lot of the time Lack of power

Table 5.5

In looking at the perceptual evaluation, however, it must be said that the voice quality noted is more that which might be expected from vocal abuse and misuse than the 'whispering dysphonia' noted above (White *et al* 1997) from psychosomatic voice disorder. As has already been noted, both are not mutually exclusive.

5.12 OVERALL DISTRIBUTION OF SCORES FOR BOTH GROUPS

Of particular interest is the distribution of the scores looking at both groups overall. This shows that 50 per cent of Primary teachers showed negative changes on both Anxiety and Depression scores and 63 per cent showed negative changes on SASS scores. This is in contrast to the FE lecturers of whom only nine per cent showed negative changes on Anxiety scores and 27 per cent on Depression scores, while 73 per cent showed negative changes on SASS scores.

With respect to positive change, 36 per cent of Primary teachers showed positive change in Anxiety scores and 25 per cent in Depression scores, with 36 per cent showing positive change in SASS scores. This is in contrast to FE lecturers, of whom 64 per cent showed positive change in Anxiety scores and 45 per cent showed positive change in Depression scores, but only 27 per cent showed positive change on SASS scores.

Twelve per cent of Primary teachers showed no change with respect to Anxiety scores, 25 per cent showed no change with respect to Depression scores. This compares to 27 per cent of FE lecturers who showed no change in Anxiety or Depression scores. All participants registered change on SASS scores during the year.

In reviewing the findings and looking to underline a possible psychosomatic link between those who experienced negative voice quality change and levels of anxiety and depression it is noticeable that for two individuals anxiety and depression scores did rise during the year. One individual did not register any change in anxiety score during the year, but it should be said that this person had begun the year with quite a high score of nine. Given the size of the sample it would not be possible to suggest that there was a robust link between worsening vocal quality and high anxiety levels, but it should certainly be considered in view of the prevailing research already alluded to. However, it is of interest to note that no FE lecturer registered any increase in anxiety during the year and it is important to consider why this difference between the groups is so marked.

Of note, however, are the differences shown between the percentage of Primary teachers who experienced negative changes in levels of anxiety and depression during the year in comparison to FE lecturers. This finding may resonate with the work of Cains and Brown (1998) whose study compared the early experiences in post of newly qualified Primary and Secondary teachers. Their study found that new Primary teachers expressed a high level of stress and found general classroom teaching issues significantly more demanding than Secondary newly qualified teachers.

In looking at the age of the Primary teachers who experienced negative change during the year, all were in their forties and it could be surmised that given the changes within the laryngeal structure that occur as a consequence of ageing, the increased voice use could be a factor in the negative voice change all experienced. In addition it may be possible to see within the older female speakers some pre-menopausal changes which could have implications for their voice use. One Primary teacher was an asthmatic and regularly used an inhaler to assist breathing. The side-effects of steroid inhalers and their effect on voice quality is well documented (Harris *et al* 1998; Mathieson 2001).

One male Primary teacher was included in the group experiencing negative change, so the factors mentioned above cannot apply to him. However, he is a heavy smoker so linked to any feelings of anxiety or depression he experienced this additional vocally abusive behaviour could have 'nudged' him into this sector. Of the FE lecturers, one individual was 29-years-old but the other FE lecturer was 41-years-old, again fitting the profile of the Primary teachers, but in addition she smoked more than 20 cigarettes per day, so this would increase her vocal vulnerability.

In looking at any significant features specifically related to anxiety and depression and social adaptability/social functioning which would link those who experienced negative voice quality change during the year, no definitive features were noted. All those in the group indicated that they had experienced previous voice loss, high levels of tension, and some behavioural features such as periodic shouting, or losing their voice when shouting. These features, however, were also noted in both other groups, so regrettably no real significance could be attributed to these factors to indicate a predisposition to

voice problems. Selected individual responses to The Victoria Infirmary Voice Questionnaire (Lockhart and Martin, in Martin 1987) are shown in Appendix 9.

The researcher tried to see if there was any statistical relevance between those who experienced negative vocal change and an increase in anxiety or depression, or both, but none could be found. There was a significant negative rank correlation of 0.416 between SASS scores at the end of the year and Anxiety scores, but this would be expected.

It could be suggested that those tests undertaken before beginning to teach, at the end of training, while the study group were still 'students', could be biased. The researcher was testing individuals in the slightly 'artificial' environment of the university and specifically at the end of each individual's university course. It could be said that the responses obtained were not related to the group's behaviour in the 'real world', seen more clearly at the end of the first year of teaching. This could explain any increased anxiety or depression or lack of social adaptability at the end of the year. However, it could also be said that the first results were more representative of the individual unaffected by the stress of the teaching year. The implications of these responses will be considered in Chapter 11.

One aspect, which is looked at in greater detail in Chapter 9, is the comparison between the vocal loading of Primary teachers and that of Further Education lecturers. It could be suggested that the extended periods of voice use experienced by older, anxious, female teachers coupled with potential physiological changes in the laryngeal structure could have made them more vulnerable.

5.13 SUMMARY

In this chapter it has been possible to note changes over the period of a year in the anxiety, depression and social adaptability scores of those who took part in the study. It was not possible to state that a reduction in an individual's social functioning was mirrored by a decline in voice quality. The chapter also examined whether changes in anxiety, depression and social adaptability scores throughout the year might, when compared to changes in vocal quality, indicate that vocal change had occurred as a

reflection of an underlying psychosomatic voice disorder rather than as a result of vocal abuse and misuse. No indication of any such link was found.

There was also evidence that 41 per cent more Primary Education teachers than Further Education lecturers experienced negative changes in Anxiety scores and 23 per cent more Primary Education teachers than Further Education lecturers experienced negative changes in Depression scores.

Ten per cent more Further Education lecturers than Primary Education teachers experienced negative changes in Social Adaptability scores throughout the year.

Mental and physical health and environmental conditions are considered to have an effect on voice quality. The next chapter will look at these issues and draw on the experiences of both groups to examine whether different teaching experiences will offer evidence to support this position.

CHAPTER 6

Predisposing Factors in Vocal Change

This chapter will examine predictive trends and predisposing factors known to affect voice quality.

It will review and consider the ways in which factors that affect voice quality, and which have been identified as part of the professional role, may impact on those within the study sample.

CHAPTER 6

6.1 INTRODUCTION

In this chapter, factors that are known to have an effect on voice quality will be reviewed and considered within the framework of the experience of the subject group. This will be achieved initially by examining the answers given to The Victoria Infirmary Questionnaire by the group and relating these responses to factors known to affect voice production. This will be done in order to see whether any predictive trends emerge from this information as to the likelihood, or otherwise, of members of the group experiencing vocal problems during their first year as professional teachers in both Primary and Further Education.

It is hoped to determine, from these sources, whether or not an already identified pre-disposition to voice disorders, coupled with factors related both directly, or indirectly, to their professional role, can be said to have contributed in any measure to the voice quality changes experienced and identified in Chapter 5.

Capel (1998) confirms that the transition from student to newly qualified teacher can be difficult, suggesting that it may be seen as both a dramatic and a traumatic change. More recent research from Rea and Parkinson (1999), Weiss (1999) and Wu (1998), confirms this. Those teachers within the study who reported problems during their first year post-qualification, and specifically problems related to oral communication, such as a voice disorder, that impinges on all aspects of their professional life, would agree.

6.2 FACTORS THAT AFFECT VOICE QUALITY

There is a multiplicity of factors that can have an effect on voice quality; some of those related to a non-organic psychogenic voice disorder have already been examined in Chapter 5. In this chapter the emphasis will be on non-organic voice disorders related to damage to the vocal folds as a result of trauma, or misuse and abuse.

In reflecting the myriad influences on voice production, it is recognised that overarching factors related to physical health, to mental health and to environmental health are seen

as contributing to vocal abuse and misuse. These factors will be looked at in more detail later in the chapter. In linking known potentially vocally damaging practices, or contributory external factors, to the vocal profile of those within the study, it may be possible to offer some predictions for subsequent vocal change, whether it be positive or negative. In the case of those who demonstrated no vocal change throughout the year, it is also important to look at factors that may have contributed to consistent use and maintenance of voice. This information will then be considered in the light of the experiences of the group in the first year of teaching, and a more composite picture will emerge in Chapter 7 of the previous vocal status of the group and the demands imposed on them, both directly and indirectly, by the teaching year.

6.3 INTERDEPENDENCY OF FACTORS THAT INFLUENCE VOICE

Previous chapters have illustrated the dependency and interdependency of a number of different factors, both obvious and subtle, in producing, sustaining and varying voice in order to communicate effectively. As was suggested in Chapters 2 and 5, the connection between emotion and voice is well recognised, and has been so for some time. Allport and Cantril's (1934) study supported the hypothesis that certain voice characteristics and certain personality traits may have developed together as reactions to situations involving social communication. Their experimental findings confirmed that voice does convey correct information concerning outer and inner characteristics of personality. Morrison and Rammage (1994) suggest that 'the human voice simultaneously conveys semantic content, momentary emotional states and the more enduring characteristics of the speaker, all modified by the social context in which the communication is taking place'. The voice serves to reflect not only the individual's emotional state and personality but also their physical state and their previous life history and experience. This point is usefully summarised by Mathieson (2001), 'In adulthood, the voice eventually provides an amalgam of personal information'

6.4 FACTORS THAT PUT TEACHERS VOCALLY 'AT RISK'

While accepting the importance of the interdependence of elements within the communication chain and the knowledge that each element will influence, or be influenced by another, the researcher felt that for the purposes of identifying specific factors that contribute to vocal attrition, within the first year post-qualification, it was

important to examine discrete categories in isolation. In this way it would be possible to see how each may affect or influence communication in general and voice production in particular. For that reason, factors which could put the teachers 'at risk' vocally were initially delineated into the broad categories, as already defined, namely: factors related to physical health, factors related to mental health and factors related to environmental issues.

In order to access this information, all those taking part in the study and 26 individuals who had initially agreed to take part in the study but were for a variety of reasons unable to do so, (n=26) completed the Victoria Infirmary Voice Questionnaire, previously developed by the researcher (Martin, 1987). This is a non-standardised point-in-time screening test that uses a battery of 82 questions. The questionnaire elicits information from respondents as to their past and current vocal health, their general physical health, both past and current, their voice use, occupational demands and environmental factors, social habits, anxiety and stress factors, vocal status and voice care, current or previous medication. Within each broad category, the researcher proposed further divisions, which could be examined in isolation and from which more specific information could be obtained.

6.5 PHYSICAL HEALTH
The category of factors related to physical health was further divided into:

6.5.1 GENERAL HEALTH
This section sought feedback from respondents on general health issues which might affect or compromise voice production, such as hearing difficulties, allergies, regular attendance at hospital, regular attendance at GP's surgery, drug use and medication.

6.5.2 PREVIOUS VOCAL HEALTH
This section sought feedback from respondents on previous vocal health issues, which might affect or compromise voice production, such as previous episodes of voice loss, childhood hoarseness, accidental injury to the vocal folds or episodes of laryngitis.

6.5.3 CURRENT VOCAL HEALTH

This section sought feedback from respondents on current vocal health issues, which might affect or compromise voice production, such as current voice quality, condition of the vocal tract, for example, frequent nasal catarrh, or discomfort when coughing, kinasthetic and perceptual feedback, such as a feeling of a 'dry' throat, with and without voice use, a feeling of tightness or a lump in the throat.

6.5.4 VOICE CARE

This section sought feedback from respondents on voice care issues which might affect or compromise voice production, such as abusive voice use, for example, shouting, smoking, drinking of spirits, and dietary habits such as eating hot spicy food.

6.5.5 VOCAL STATUS

This section sought feedback from respondents on current vocal status issues, which might affect or compromise voice production, such as difficulty in making themselves heard, singing and perception of their own voice.

6.6 MENTAL HEALTH

The category of factors related to mental health was further divided into:

6.6.1 ANXIETY AND STRESS

This section sought feedback from respondents on anxiety and stress issues, which might affect or compromise voice production, such as self-assessment of personal levels of tension and degrees of anxiety experienced about their voice.

6.6.2 SOCIAL FUNCTIONING

This section sought feedback from respondents on social functioning issues, which might affect or compromise voice production, such as, degree and place of social contact.

6.7 ENVIRONMENTAL HEALTH

The category of factors related to environmental health was further divided into:

6.7.1 OCCUPATIONAL

This section sought feedback from respondents on occupational demand issues which might affect or compromise voice production, such as personal risk related to their occupation, or the need for occupational change related to voice use.

6.7.2 ENVIRONMENTAL

This section sought feedback from respondents on environmental issues which might affect or compromise voice production, such as the work and home environment, for example dust, use of chemicals and noise pollution.

6.8 COLLATION OF RESPONSES

Using the Victoria Infirmary Voice Questionnaire, the researcher was able to collate responses into the sections noted above. The following tables show all positive responses obtained within each section from all those who completed the questionnaire. These tables include information from those students who either attended voice training or who were prepared to act as controls in the study.

The responses were divided into those obtained from individuals in Further Education training (n=28) and those in Primary Education training (n=18). The responses obtained show some significant differences in the profile of the groups in, for example, the number of individuals who smoke or the number of individuals who had experienced a hoarse voice. Each table will provide further specific examples. It is recognised that with the small number within each group, it would be unwise to assume that these responses could be generalised to a larger student population. Due to the design of the project, the respondents could be described as self-selecting, which has important implications as to the validity of the responses. This question has already been addressed is Chapter 4. In the opinion of the researcher the responses obtained do offer ethnographic detail on a particular student population at a specific moment in time. The results, it is suggested, are of interest in a wider framework, as information additional to that related to vocal health, voice use, voice care and current vocal status has been accessed. This additional information, albeit related directly and indirectly to voice use, offers information related to the general health of the group, recreational habits, occupational demands, environmental factors, amount of stress and anxiety experienced.

This is information which might not normally be accessed, and may contribute to a greater knowledge base regarding larger cohorts of students on similar programmes.

6.9 GENERAL HEALTH

Here the general health profiles of Further Education students and Primary Education students is remarkably similar. Although small in number, (five in total, Question 82) of those students who reported having used tranquillisers or anti-depressants, four were Primary Education students. Eleven of the students took a drug regularly (Question 78), although it was not specified as to whether this was recreational or prescribed.

None of the group took sleeping pills often, 13 of the group had had a hearing test (Question 68) but again this response did not indicate when nor its result.

Fifteen of the group, more Primary Education students than Further Education students, had been allergic to something (Question 74) while only five of the group attended their own doctor regularly (Question 76). A high proportion of the group, but an equal number of both student cohorts, had been in hospital (Question 77), but only 11 had been in hospital for more than one week.

Questions Related to General Health by Education Sector

Question Number	Further Education	Primary Education	Total
67	5	4	9
68	7	6	13
74	6	9	15
75	1	1	2
76	3	2	5
77	13	13	26
77.1	6	5	11
77.2	1	3	4
78	5	6	11
79	4	2	6
80	1	3	4
81	0	0	0
82	1	4	5

Table 6.1

6.10 PREVIOUS VOCAL HEALTH

Here the profile of both student groups is quite similar, in that a small number had completely lost their voice (Question 2), had experienced hoarseness which varied in severity (Question 8) and identified it as being worse in the morning than at any other time. (Question 8.1). However, a much greater number of Further Education students reported that they had been hoarse before (Question 3) and of those individuals who had lost their voice while trying to shout (Question 29) nine of the 14 were Primary Education students. In response to questions regarding childhood periods of hoarseness (Question 70), accidental injury to the vocal folds (Question 71) and laryngeal examination (Question 72), the responses were small in number, but more Primary Education than Further Education students had had a laryngeal examination. None of the group had had any abnormality of the vocal folds in childhood (Question 69).

Questions Related to Previous Vocal Health by Education Sector

Question number	Further Education	Primary Education	Total
2	3	4	7
3	21	13	34
4	7	8	15
5.1	5	4	9
5.2	6	7	13
5.3	0	2	2
5.4	0	0	0
6	16	11	27
7	1	4	5
8	8	7	15
8.1	8	8	16
8.2	0	1	1
8.3	0	0	0
28	5	2	7
29	5	9	14
69	0	0	0
70	2	0	2
71	0	0	0
72	1	3	4
73	2	1	3

Table 6.2

6.11 CURRENT VOCAL HEATH

Here again the distribution of responses is quite similar with respect to wanting to swallow often (Question 55), to clear the throat often (Question 56), to suffering from frequent nasal catarrh (Question 58), to responding positively to experiencing shortness of breath (Question 50) and to having a dry throat (Question 53) but more Further Education students than Primary Education students reported experiencing the conditions and as a proportion of those questioned, the number in total is quite significant. Of particular note were the numbers who reported having a dry throat after using their voice a lot (Question 54), 19 Further Education students and 15 Primary Education students. Those who experienced a feeling of tightness in their throat, 17 in number (Question 64), is again a high proportion of the total. In looking at these responses it is not possible to plot these against a representative country-wide general population sample because no large scale or national survey has been done, but in the researcher's opinion the number of positive responses for a small sample is high.

Questions Related to Current Vocal Health by Education Sector

Question Number	Further Education	Primary Education	Total
1	6	2	8
50	13	11	24
51	6	4	10
52	4	6	10
53	14	10	24
54	19	15	34
55	9	7	16
56	11	9	20
57	9	8	17
58	5	2	7
59	3	2	5
60	11	7	18
61	5	3	8
62	2	3	5
63	5	3	8
64	9	8	17

Table 6.3

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6.12 VOICE CARE

In looking in more detail at these responses, a considerable number of students, 32, responded positively to Question 27, 'Do you ever shout?' Considerably more Further Education students drank (Question 46) and similarly more Further Education students than Primary Education students smoked (Question 49), although as part of the total group, the number (seven), was not high.

Questions Related to Voice Care by Education Sector

Question Number	Further Education	Primary Education	Total
25	1	1	2
26	3	5	8
27	15	17	32
46	19	13	32
46.1	12	10	22
46.2	4	0	4
46.3	0	0	0
47	11	5	16
48	18	14	32
49	7	1	8
49.1	1	1	2
49.2	2	0	2
49.3	1	0	1

Table 6.4

6.13 VOCAL STATUS

Most significant of the responses in this table is that to Question 45, which asked if the respondent's voice was hoarse or weak after a night out. Almost twice as many Further Education students, 17 as compared to nine, responded positively. It should, however, be remembered that they smoked and drank more. More Primary Education students reported that they sang while at work and at home (Question 21). Although more Further Education students (four) sang socially than Primary Education students (one) the number in total was small (Question 22).

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Questions Related to Vocal Status by Education Sector

Question Number	Further Education	Primary Education	Total
18	7	5	12
19	3	0	3
20	5	6	11
21	10	15	25
22	4	1	5
23	7	10	17
24	6	11	17
45	17	9	26
65	6	5	11
66	6	7	13

Table 6.5

6.14 ENVIRONMENT

The high number of responses to Question 10 might have been anticipated as they indicate that the majority had central heating either at work or at home. Perhaps more significant were the responses to Question 11, which confirm that almost one-third of the group work in dusty conditions, with more Primary Education students than Further Education students affected. A small number of students (four in Further Education and one in Primary Education) work with chemicals (Question 12) and the same number in total have to talk above the noise of office machinery (Questions 13). Question 15 also had a high positive response rate, with 34 of the student group reporting that they talked to people at some distance from them.

Questions Related to the Environment by Education Sector

Question number	Further Education	Primary Education	Total
10	20	16	36
11	5	8	13
12	4	1	5
13	3	2	5
14	2	8	10
15	19	15	34
16	5	7	12
17	5	6	11

Table 6.6

6.15 OCCUPATION

In response to Question 36, eight Further Education students but no Primary Education students reported that their work took them away from home. Of the student group, only nine Further Education students and only four Primary Education students were able to cope with their job without worrying (Question 40). None of the students thought that they could continue in their present employment if they lost their voice completely (Question 38).

Questions Related to Occupation by Education Sector

Question Number	Further Education	Primary Education	Total
9	22	17	39
36	8	0	8
37	4	1	5
38	0	0	0
39	1	0	1
40	9	4	13

Table 6.7

6.16 ANXIETY AND STRESS

Here a high number of Further Education students in comparison to Primary Education students confirmed that they worried unnecessarily (Question 30). In total 19 students described themselves as being 'a tense person' (Question 31), while a high number, 23, reported that they often sat on the edge of a chair instead of leaning back (Question 33). Again, more Further Education students than Primary Education students reported 'yes' to this question.

Questions Related to Anxiety & Stress by Education Sector

Question number	Further Education	Primary Education	Total
30	15	7	22
31	10	9	19
32	5	3	8
33	14	9	23
34	8	5	13
35	11	11	22
35.1	5	7	12
35.2	3	3	6

Table 6.8

6.17 SOCIABILITY

In looking at this table it is apparent that more of the Further Education group report going out a lot socially (Question 41), but this may be a feature of age or domestic situation. A similar but small number of both student cohorts go out only at the weekend (Question 42) while many more Further Education than Primary Education students go out at weekends and during the week (Question 43). For those students who do go out, the majority prefer to go either to the country (Question 44) or to a friend's home for the evening (Question 44.1).

Questions Related to Sociability by Education Sector

Question Number	Further Education	Primary Education	Total
41	14	7	21
42	4	5	9
43	19	12	31
44	15	8	23
44.1	16	11	27
44.2	1	2	3
44.3	8	1	9

Table 6.9

These responses have offered some interesting detail about the student group. It is hoped that this increased knowledge may be of use in hypothesising how they may respond vocally once the demands of their professional role are added.

6.18 RESULTS FROM RESEARCH GROUP

The following tables reference only the results obtained from those individuals who continued to take part in the study. These tables additionally indicate whether the respondent had shown either a positive or a negative, or no voice quality change throughout the year. These results were intended to offer information on predictive factors, which might indicate potential vocal problems within the group so, as has been stated, the responses were obtained at the end of training and before teaching began. The results from each table will be examined more closely later in the chapter while illustrative examples from the subject group that could be directly attributable to the teaching experience will be explored in Chapter 7.

Questions Related to General Health

Question Number	Positive Quality Change	Negative Quality Change	No Change	Total
67	1	2	1	4
68	1	1	5	7
74	1	3	3	7
75	1	0	0	1
76	2	1	3	6
77	3	6	6	15
77.1	1	2	2	5
77.2	1	1	0	2
78	1	2	3	6
79	1	1	1	3
80	1	0	0	1
81	0	0	0	0
82	1	1	1	3

Table 6.10

Questions Related to Previous Vocal Health

Question No.	Positive Quality Change	Negative Quality Change	No Change	Total
2	0	2	1	3
3	3	6	8	17
4	1	3	0	4
5.1	0	1	1	2
5.2	1	4	4	9
5.3	0	2	0	2
5.4	0	0	0	0
6	1	7	6	14
7	1	0	1	2
8	0	1	5	6
8.1	0	5	5	10
8.2	0	1	0	1
8.3	0	0	0	0
28	0	1	2	3
29	0	4	2	6
69	0	0	0	0
70	1	0	0	1
71	0	0	0	0
72	1	1	1	3
73	0	1	2	3

Table 6.11

Questions Related to Current Vocal Health

Question Number	Positive Quality Change	Negative Quality Change	No Change	Total
1	2	0	1	3
50	2	4	5	11
51	0	3	3	6
52	2	3	1	6
53	1	6	4	11
54	4	6	8	18
55	0	3	3	6
56	1	5	3	9
57	1	7	3	11
58	0	1	1	2
59	0	1	0	1
60	1	5	3	9
61	0	2	1	3
62	0	1	1	2
63	0	2	1	3
64	1	3	3	7

Table 6.12

Questions Related to Voice Care

Question Number	Positive Quality Change	Negative Quality Change	No Change	Total
25	0	0	0	0
26	0	1	1	2
27	3	7	5	15
46	2	6	6	14
46.1	2	4	6	12
46.2	0	0	1	1
46.3	0	0	0	0
47	0	2	4	6
48	2	5	5	12
49	0	2	3	5
49.1	0	1	0	1
49.2	0	1	0	1
49.3	0	0	1	1

Table 6.13

Questions Related to Vocal Status

Question Number	Positive Quality Change	Negative Quality Change	No Change	Total
18	2	1	2	5
19	0	0	1	1
20	0	4	1	5
21	2	5	6	13
22	1	0	2	3
23	2	1	4	7
24	2	3	3	8
45	3	5	6	14
65	1	2	2	5
66	2	3	3	8

Table 6.14

Questions Related to Anxiety and Stress

Question Number	Positive Quality Change	Negative Quality Change	No Change	Total
30	1	2	5	8
31	1	4	4	9
32	0	1	4	5
33	2	4	3	9
34	2	2	1	5
35	1	3	4	8
35.1	2	4	1	7
35.2	0	2	3	5

Table 6.15

Questions Related to Social Functioning

Question Number	Positive Quality Change	Negative Quality Change	No Change	Total
41	4	3	4	11
42	0	3	2	5
43	4	3	6	13
44	2	5	5	12
44.1	2	6	4	12
44.2	0	1	0	1
44.3	1	0	3	4

Table 6.16

Questions Related to the Environment

Question number	Positive Quality Change	Negative Quality Change	No Change	Total
10	4	7	7	18
11	2	3	1	6
12	1	0	2	3
13	0	0	1	1
14	0	0	1	1
15	3	5	7	15
16	0	2	1	3
17	1	1	3	5

Table 6.17

Questions Related to Occupation

Question Number	Positive Quality Change	Negative Quality Change	No Change	Total
9	4	6	7	17
36	1	1	2	4
37	0	0	1	1
38	0	0	0	0
39	1	0	0	1
40	1	2	2	5

Table 6.18

6.19 REVIEW OF THE RESPONSES

In reviewing the responses obtained, with a view to gaining greater knowledge about possible predictive factors, it was important to look in more detail at the results. Of particular interest were those questions that had a positive response rate of 50 per cent or more and where a specific link to voice could be seen by the researcher. Some questions which had a high response rate, but where a less direct link to voice could be shown, are noted in Appendix 14, but are not explicitly discussed.

6.20 PREDICTIVE FEATURES

In looking at predictive features from these categories the following factors are of note and, given the heavy demands of teaching, could be of concern in terms of vocal health. A high percentage of the group had already experienced hoarseness of varying degrees of severity, indicative of vocal abuse and misuse. The majority of those respondents, 14

out of 17, noticed that their voice returned gradually. A gradual return of voice quality is again indicative of vocal abuse and misuse where the damaged vocal mucosal covering of the vocal folds gradually returns to normal. In hoarseness or voice loss attributable to a psychogenic voice disorder the voice would tend to return suddenly. Only two of the study group experienced a sudden return of voice, but this could be of concern as a feature of anxiety and stress which may well be exacerbated by professional pressure. In looking at changes in the severity of hoarseness, 10 of the respondents noted that hoarseness was worse in the morning. This may again be a factor of environmental influences such as a dry mucosal covering, due to central heating or the effect of smoking, alcohol or overuse. Eighteen of the respondents experienced a dry throat after using their voice a lot, and 11 reported that their throat often felt dry: again an indication of dry mucosal covering of the vocal folds. Fourteen of the group reported a weak or hoarse voice after a night out, again an indication of vocal abuse and misuse. Five of the group reported that their voice became weaker as they talked and six of the group noted a loss of voice when trying to shout, indicating excessive vocal demand and poor vocal practice.

Frequent throat clearing and coughing are vocally abusive habits, as are shouting and drinking. Tension, anxiety and stress were reported by just under 50 per cent of the group, while heavy vocal demands, regardless of the preferred location, were imposed on those of the group who reported that they frequently went out socially.

6.21 IMPLICATIONS FOR EFFECTIVE VOICE USE
In reviewing these responses, it is evident that within the group voice use and vocal demands were high, allied to a less than ideal regime of vocal care. While accepting that some of the demands may lessen in the transition from student to teacher, (for example, social functioning may reduce) and as a result voice care may improve, there will be increased vocal demands as a function of the teaching role. There was also an awareness, on the part of the researcher, that many newly qualified teachers will experience episodes of stress and anxiety which will have additional implications for effective voice use. This stress and anxiety will be a feature of factors which relate both to the transition from student to teacher and their professional experience in the first year post-qualification. As an example of such, schools are expected to provide a

reduction of 10 per cent in timetabled duties designated for the newly qualified teacher's induction period (TTA 1999b) yet this does not reflect the experience of those within this study. Cole (1985) identified a number of newly qualified teachers in his study who despite disillusionment and in some cases a definite desire not to teach, sought teaching jobs in order to confirm that teaching was not for them. This would imply that for some newly qualified teachers uncertainty regarding their future will be an additional source of stress. Tickle (2001), in raising the issue of the problems implicit in ensuring the quality of in-service education for newly qualified teachers, suggests that 'the experience of many generations of new entrants has been left to the vagaries of 'experience'' This aspect, as with the issue of mentoring provision addressed later, will be an issue of concern and potential stress to many.

6.22 INDIVIDUAL PROFILES

A more detailed profile of 12 of those taking part in the study is presented in Appendix 12. Four are selected from each category detailed in Chapter 5, namely positive voice quality change, negative voice quality change and no voice quality change. Where possible, the samples include two Primary Education teachers and two Further Education lecturers. The profiles are included to try to identify which presenting factors might be seen to influence or predict future voice quality outcome. This would be framed within prognostic indicators known to the researcher as part of her professional role. For the sake of increased clarity these prognostic indicators have been divided into the following sections:

1. Breathing related - where breath support, capacity, and/or control are affected.
2. Vocal tract related - where the vocal tract is affected above and below the larynx.
3. Vocal vulnerability - where the voice is already 'at risk'
4. Stress/anxiety related – where stress and anxiety affect voice production.
5. Voice production related - where factors adversely affect the ability of the larynx to produce voice.

Where information, known to affect the voicing process and thereby vocal quality was supplied by respondents, it was attributed to the respective prognostic indicators already

noted. Where factors could be implicated in more than one section, they were entered in each section as appropriate.

The researcher was interested to discover whether in the case of those individuals who experienced negative voice quality change their profiles included factors which could be seen to negatively affect voice production, even before the additional vocal loading imposed by teaching.

In the case of those who experienced either positive voice quality change, or no voice quality change, it will be important to try to offer an explanation as to why those within these groups, who presented with similar profiles to those with negative voice quality change, did not experience a similar outcome.

Changes in vocal quality were assessed by the researcher and an expert listener using the device of a five-point graded perceptual rating scale from A to E to evaluate vocal quality. This evaluation scheme is explained in detail in chapter eight. Grade A was designated as meeting the vocal quality required of a professional voice user and E was designated as evincing vocal qualities which caused the listeners strong concern. Within each category, qualifiers of plus or minus provided an additional marker, indicating the overall vocal quality to be nearer the category above or below respectively.

6.23 NEGATIVE CHANGE IN VOICE QUALITY

The vocal profiles of two Further Education lecturers and two Primary Education teachers who experienced negative voice quality change during the year show that all the subjects have significant problems with regard to respiration and conditions of the vocal tract, which make the voice vulnerable. In addition they present with problems related to stress and anxiety, and voice production. Given the difficulties that all presented before beginning to teach it is perhaps not surprising that the demands of the teaching role have further negatively influenced their vocal profile.

As a commentary on the findings from those who demonstrated negative voice quality change, F9 began the year with a C+ rating and ended the year with a C rating. P8 began the year with a C+ rating and ended the year with a D rating. P1 began the year

with a B- rating and ended the year with a C+ rating while F2 began the year with a B-rating and ended the year with a D rating.

Both Primary Education teachers were working full-time as was the Further Education lecturer, F9. Further Education lecturer F2, was working for a maximum of two days per week but encountered a high degree of stress in the post, as did Primary Education teacher P1.

6.24 NO CHANGE IN VOICE QUALITY

The vocal profiles of four individuals who experienced no change in voice quality during the year, three Further Education lecturers and one Primary Education teacher, show that all subjects presented with significant problems in all sections. The researcher's hypothesis that those who presented with no voice quality change throughout the year would present with limited prognostic indicators at the beginning of the teaching year was therefore incorrect. In defending this outcome, however, it was notable that of those who experienced no perceptual voice quality change, two of those who are here profiled, F7 and FN1, were awarded initial ratings of C+ for voice quality. This indicates that their initial vocal quality, while not of great concern was not of an acceptable standard and it may be that the factors identified as contributing to poor voice quality maintained this unacceptable vocal quality and were sufficiently well established not to further affect the voice. It should also be noted that FN1 had only four hours of teaching per week, so the vocal loading was not significant.

6.25 POSITIVE CHANGE IN VOICE QUALITY

The responses from four individuals, two Further Education lecturers and two Primary Education teachers who experienced positive voice quality change throughout the year show that all the subjects apart from one, (Subject F5) presented with significant problems in a number of sections. Although Further Education lecturer F5 demonstrated problems solely in the vocal vulnerability section, the features that were reported would have been seen, from a clinical point of view as significant, for example, the episodes of hoarseness.

As a commentary on the findings from those who demonstrated positive voice quality change, P6 and F5 began with a B rating and moved to B+, while P3 began at C+ and moved to B-. The greatest shift was achieved by F1, who moved from D+ to B-. Both Primary Education teachers, P6 and P3, were working full-time, both Further Education lecturers were working only part-time, one of whom, F1, was doing very little teaching and mostly to small groups.

In reviewing these results the undifferentiated nature of the presenting problems between the different groups, were quite unexpected. A very different profile would have been expected from those who demonstrated positive change, in that poor prognostic features would have been considered as contra-indicators for improved vocal quality.

This finding therefore presents a clinical challenge; if prognostic features which clinicians have historically considered as very significant, do not appear from the results of this study to be as significant as had been anticipated, then there is a need to look at a very different spectrum of factors as predictors of vocal change. This would lend support to the view that the effect of occupational stressors and vocal loading has a much greater impact on vocal quality change than may have previously been thought. The findings offer a very interesting clinical perspective, one which the researcher hopes to follow up with a clinical colleague and a group of voice patients.

6.26 SUMMARY

In assessing these responses it is apparent that a number of similar factors were identified in all groups with no apparent specific factor only presenting in those who experienced negative voice change throughout the year. However, as has been noted, some individuals, for example, subject FN1 who showed no change in vocal quality throughout the year despite very abusive vocal habits, had a very low perceptual voice quality rating on initial recording.

Teaching is regarded as a stressful occupation and recurring stressors in the teaching environment have been well documented. (Coates and Thoreson 1976; Dunham 1980). These stressors include high workloads, time pressures, problems with pupils, and lack

of recognition for the work done. If the results outlined above are considered within the framework of these noted stressors, then in the view of the researcher, there was a strong pre-disposition for voice problems within the group. It was not, however, possible to accurately determine whether or not that prediction was correct without evidence from the group from the first year of teaching, which is contained in the following chapter.

CHAPTER 7

Exploring the Professional Transition Process

This chapter will review the demands imposed on members of the study sample as a consequence of their roles as newly qualified teachers/lecturers.

It will illustrate the transitional process from student to newly qualified professional with the attendant change and problems that this entails. Specific reference will be made to the effect that this has on voice quality and vocal use.

CHAPTER 7

7.1 INTRODUCTION

In reviewing the information gained from The Victoria Infirmary Questionnaire completed by the student sample, a number of factors emerged. These concerned, in part, the previous and current mental health of the group, their previous and current physical health, and factors within their environment which could contribute to vocal misuse and abuse. In this chapter, the demands imposed on members of the group, both directly and indirectly, due to their occupational role as newly qualified teachers/lecturers will be examined more closely. This information will then be considered in the light of the negative prognostic indicators for the maintenance of voice, which have already been identified. It is hoped that this will augment the current knowledge base regarding the transition from student to newly qualified teacher which, as has already been identified by Capel (1998), is seen as both a dramatic and traumatic change.

7.2 INFORMATION SOURCE

This chapter will examine information gained from recorded responses to questions asked during the semi-structured interviews held with respondents. These interviews were held at the end of the winter, spring and summer terms during the first year of teaching: 1998-1999. The questions covered a range of topics which incorporated the experiences that all had had during the transitional process from student to newly qualified teacher/lecturer in the first year post-qualification. This chapter will attempt to draw links between the occupational demands experienced by the group, in their role as newly qualified teachers/lecturers, and the factors known to affect voice, namely physical health, mental health and environmental factors. While particular emphasis is given to the demands on newly qualified teachers/lecturers, many of the findings would be applicable to the demands of the teaching role regardless of length of experience.

It was not possible to ensure that information was acquired from all members of the study in the same manner and to the same extent. In practice some of the group were unavailable for all interviews. The researcher accepts that this may be a limitation of the

study design. The material included in this chapter is deemed to represent the experiences of the majority of those in this phase of the study (N=20).

7.3 INTERVIEW PROCESS

Chapter 5 explored the link between stress and anxiety and voice, and for that reason, the researcher, cognisant of the difficulties already recorded in the transition from student to teacher, was concerned to explore the experiences of those in the study. Respondents were therefore asked a number of questions at the end of the first, second and third terms of employment and the responses were given without prompts. While the responses contained in Appendix 13 are a verbatim account of the answers given to the researcher, with a respondent identifier designated alongside, they are not the full answer but are chosen to reflect as accurately as possible the essence of the reply. A complete transcription of a selected number of responses is provided in Appendices 8,9, and 10. In order to make any differences between those teaching in Further Education and those in Primary Education clearer, the responses have been separated into designated groups.

This chapter details the actual question (shown in italics) and offers a summary of the responses provided.

7.4 TERM 1 - QUESTIONS

7.4.1 QUESTION 1

Respondents were asked *'What difficulties did you experience in the transition from student to teacher?'*

Review of Responses

In reviewing the responses, issues of responsibility were the most often quoted difficulty of the transitional process, with:

- Six out of seven of the respondents in Further Education citing responsibility as part of their professional role as a particular difficulty.

- Six out of seven of the respondents in Primary Education citing responsibility as a feature of their professional role as a particular difficulty.

7.4.2 QUESTION 2

In order to identify further potential stress or anxiety experienced, respondents were asked to identify major stress factors they had encountered within the job during their first term in post. Respondents were asked *'Can you identify some of the major stress factors within the job?'*

<u>Review of Responses</u>

In reviewing the responses to this question both sectors showed a consistent over-lap, there were no clear differences identified between sectors. Both groups expressed issues to do with work-load, time management and politics. Some of these, mirror those reported by Wallace (2002) 'polarity between management and teachers', 'low level of punctuality and attendance displayed by students in all classes', 'lecturers feel their scope for classroom management is hobbled by ... risk of loss of funding to the college' Woods (1984) has suggested that the trials that teachers go through in the first one or two years of teaching are a 'sort' of initiation, and a matter of pride to those who have successfully negotiated them. While the respondents identified the major stresses that they encountered during the first term, there was not at this stage in their teaching career any evidence of pride in having negotiated the difficulties. The changes in respondents' perceptions of their first year in teaching, reflected in their comments during an end of year interview, will be explored later.

Of significance, however, at this point are the issues already noted, which respondents identified in terms of their transition from student to teacher and the stresses within the job that they encountered, that could be seen to have implications for their mental health and thus on their vocal profile.

7.4.3 QUESTION 3

The respondents were asked *'what vocal changes did you note during the term?'*

<u>Review of Responses</u>

It is significant that among the responses given <u>all</u> of the respondents, from both the Primary Education sector and the Further Education sector, had experienced vocal change within the first term. Of great concern was the evidence from those within the Primary Education sector of considerable vocal abuse and misuse. This was evident from the reporting of voice loss, muscle tension disorders (throat tight, throat tired) a

lowering of pitch or vocal note, intermittent voice loss (croaked, started to speak and voice would stop) and significantly, the comment from one respondent that despite straining voice by shouting and a sore throat there was 'no major problem'. In comparing the experience of those in Further Education, there was again evidence of vocal abuse and misuse from muscle tension disorder (larynx ached, felt sort of bruised, tired, voice getting sore) to evidence of pitch change (voice getting higher, became squeaky) which indicates increased tension and lengthening of the vocal folds as a result of tension within the vocal tract. The lack of complete voice loss within the Further Education sector may be a feature of the reduced vocal loading, or at least the vocal recovery period, normally experienced by lecturers as a consequence of their weekly teaching commitments, compared to those in Primary Education. The data referencing this is more fully explained in Chapter 9.

7.4.4 QUESTION 4

Respondents were asked if they had found their voice *'equal to the task of teaching'*

Review of Responses

Of significance in these responses is the fact that only three respondents from Further Education and only two from Primary Education felt that their voice was equal to the task. That is indeed of concern, as without any further training, those whose voices were vulnerable may well find that any additional demands placed on the voice may herald further vocal deterioration.

7.4.5 QUESTION 5

In order to assess the importance given to voice care within their teaching environment the respondents were asked *'Is voice care seen as important by fellow staff members?'*

Review of responses

The negative responses to this question by those in both sectors is not unexpected, given the historical lack of attention already cited to voice within the teaching profession. In addition there is a known, yet anecdotal, reporting by teachers that they are disinclined to admit to vocal 'weakness' or 'problems' and especially so to a new staff member. It is none the less of deep concern and supports the finding of previous studies, already noted in this text.

7.4.6 QUESTION 6

Respondents were asked '*As you have become more comfortable in your professional role have you noticed any change in the way you use your voice?*'

Review of Responses

It is notable that respondents had attempted to lower their voices in an effort to achieve more control. This is to be regretted as artificially lowering the voice can cause negative vocal change. Some respondents slowed their rate of speech down, which would lessen vocal abuse as it would reduce the amount of heat generated from the vocal folds and therefore cause less drying of the vocal fold mucosal surface. It should be said that this might not make a significant difference unless the vocal loading was high.

7.5 REVIEW OF INITIAL INTERVIEW RESPONSES

In reviewing the responses to these initial interviews it is possible to make some tentative comments on the group's early experiences of the transition process from student to teacher. It may also be possible to draw on those factors which are known to adversely affect voice, and which were highlighted by the interviews, namely problems related to physical health, mental health and environmental factors.

Chapter 6 has already identified certain aspects of previous and current physical or general health, which have significance for good vocal health. Research which targeted all teachers working within western Australia (Russell 1999) identified good physical health as one of the most important factors in the maintenance of good vocal health. The findings from this study sample, also show that teachers frequently cited problems of physical health, namely tiredness and exhaustion. The following extracts are offered as a representative sample from the group's experience.

> 'the physical tiredness and having to be on your feet probably affects my voice, I have got so drained physically I don't know that I could do it every day to be honest'
>
> Student P5

> 'complete exhaustion physical and mental'
>
> Student P8

'I could not do it full time I would not be prepared to be in school at 8am and go home at 6pm and mark books to 10'
Student P2

'I knew it would be challenging, I knew it would be hard work, when you are working in the evenings I think 'What am I doing?'
Student P4

The extreme tiredness experienced by the group, particularly in the first term, was reportedly due to the number of hours worked. On average, individuals reported working for 60 to 70 hours per week, with several, particularly those in Primary Education, working most weekends as well. An additional factor in the physical exhaustion reported by the group could be related to the physiological effect of an over-production of adrenaline and noradrenaline due to the amount of stress encountered, which has already been noted above. An additional cause of the reported tiredness may be related to the distance travelled to work, which was a particular problem for those in the Further Education sector. This was due to the fact that four of the respondents had not been able to find full-time posts within the sector, so they were teaching on a number of different sites, with some considerable distance between them. Not only did the additional time spent travelling contribute to the physical exhaustion but it also contributed to increased levels of stress. For those travelling by car, as many did, the postural effects of sitting in a confined space for a prolonged period have implications for voice production.

A number within the group experienced persistent colds and upper respiratory tract infections, particularly those working in the Primary Education sector. It is possible that this was solely due to exposure to a number of different infections within the classroom setting; it may be that a lowered resistance to infection as a result of tiredness was also a contributory factor.

In reviewing the findings above, in the light of the results from the Victoria Infirmary Questionnaire (chapters 5 and 6), the already strong pre-disposition for voice problems within the group was confirmed by the experience of the group during their first term in

teaching. It was, however, important to look at the transitional process over an academic year, not only over a term. In addition it was important to judge vocal change beyond the initial induction period with an awareness that some of the concerns expressed by the group regarding the transitional process may have an impact on vocal health.

7.6 EXPERIENCE OVER SUBSEQUENT TERMS

In the subsequent terms respondents were questioned again on aspects of their professional role and vocal health and the following responses were given. It should be noted that it was not always possible to interview all respondents.

7.7 TERM 2

7.7.1 QUESTION 1

At the end of the Spring term other questions were posed. Respondents were first asked, *'Now that you have completed another term, what changes in your approach to the job can you identify?'*

Review of Responses

In reviewing the group's responses it was apparent that increased levels of organisation and planning had occurred and within the Primary Education group there was a demonstrable increase in their levels of self-confidence, which was a very positive outcome. This is not to minimise the effect of the challenges within the job, which could have undermined the efforts of some of the teachers.

7.7.2 QUESTION 2

The group was asked *'What stress factors have you identified within the job and have these increased or decreased since the last term?'*

Review of Responses

In reviewing the responses, notable were the recurring themes of increased pressure, stress, tiredness (sometimes not explicitly noted) and the effect these had on the teachers. Within both sectors, similar numbers of respondents were experiencing increased stress and pressure. This mirrors the work of Wu (1998), whose study of NQT's reported that almost all respondents had strong feelings about the 'huge work pressures they have to cope with'

7.7.3 QUESTION 3

Respondents were asked *'What do you consider to be your greatest success?'*

<u>Review of Responses</u>

In reviewing the responses, staff most regularly evinced pride in, or saw success as being related to two areas, that of lecturer/student or teacher/pupil relationships, or pupil/student progress. This response may reflect factors which are motivational in the choice of teaching as a career (Doliopoulou, 1995; Moran *et al* 2001).

7.7.4 QUESTION 4

The group was asked *'What do you consider to be your greatest failure/disappointment?'*

<u>Review of Responses</u>

In reviewing the responses it is obvious that the respondents were both very self-critical and very ready to 'own' failure. The high expectations of the group were obvious and it may be significant to note that the majority of the group were older students who had put great efforts into achieving a place at university and who wanted to do well. In addition the Further Education group had had previous professional employment before they began the PGCE. This group may be more self-critical than those who enter university straight from school. In framing what they see as an appropriate competency level, they may be unduly self-critical. If this is the case then the respondents may put themselves under a high degree of unwarranted stress, which will adversely affect both their mental and physical health.

7.7.5 QUESTION 5

The group was asked, 'What vocal changes did you note during the term?'

<u>Review of Responses</u>

In reviewing the responses it is of considerable concern to note that the respondents cited evidence that more long-term vocal change had taken place in the second term which would impact on the damage done during the first term. For example, respondent P6 noted cumulative change and P3 noted that after experiencing vocal change at the start of the school year there has been no subsequent improvement and a lower-pitched voice is now used consistently. For one respondent, P2, the lower vocal quality is deemed an improvement, yet this lower pitch could indicate significant change

in the vocal folds. The vocal changes that have occurred with so many of the group are evidence of the demands of the teaching role. These changes are not encouraging indicators of long-term vocal health for those who remain in teaching for some time.

7.7.6 QUESTION 6

The group was asked, 'Has the job measured up to your expectations?'

Review of Responses

In reviewing the responses it may be noted that more than 50 per cent of the respondents agreed that it had met their expectations. In terms of the respondents' long-term engagement in the profession, a higher percentage of positive responses would have been more encouraging, but this may be a feature of the first year and the transition phase from student to teacher

7.7.7 QUESTION 7

The group was asked, 'If you had a wish list for the profession, what would it contain?'

Review of Responses

In reviewing the responses it is significant that only a very small percentage of teachers in both sectors cited more pay, even though teachers in Further Education are paid less than those in Primary Education and historically teaching has been known to offer quite low financial reward. This response is probably not unexpected, as it is known that for those within the profession, reasons for entering teaching are often altruistic in nature (Lortie 1975; Brown 1992; Reid and Caudwell 1997), and predominately though not exclusively intrinsic in nature (Moran et al 2001). It is of interest to note a similar response from this study. The all-encompassing profile of the wish list showed that aspects of professionalism, accountability and respect or recognition for the job were seen as more important than financial gains for many of the respondents. Requests for budgets for professional development mirror the concern expressed by Odell (1986), Napper-Owen (1996) and more recently by Tickle (2001) who suggests that '... one factor that stands out (from the images of the new teacher, the induction process and the demands of the education service) is the need to recognise the importance of and provide for the development of the personal dimensions of being a teacher'. Kearns

(2001), however, noted a rather hesitant response to an early professional development programme for newly qualified teachers or, to use his term, beginning teacher (BT).

7.8 TERM 3

At the end of their first year in teaching, respondents were asked to respond to a further raft of questions. As a number of the questions required relatively detailed and certainly reflective answers, students were sent the questions in advance so that their subsequent responses were considered.

7.8.1 QUESTION 1

The respondents were initially asked, *'When you reflect on this first year post qualification, what have been the most significant professional issues for you?'*

Review of Responses

In reviewing these responses it is significant that for those in Further Education, issues of employment and re-employment were identified as the most significant professional issues, in contrast to the Primary Education sector where employment was not an issue. These responses underline the concern of those in Further Education regarding the current funding and employment opportunities within this sector. This finding is of interest when comparing it to that of McKelvey and Andrews (1998), who noted that 'most of our students did not expect teaching in FE to offer job security'. Uncertainty about future employment must be seen as a significant element, which contributes to individual anxiety levels and therefore has an impact on mental health. For those in Primary Education staff relationships were most often identified as of most significance. Again within the rather close and closed primary school working environment, negative relationship issues will have an impact on mental health.

7.7.2 QUESTION 2

Respondents were asked *'Do you now feel secure in your professional identity?'*

Review of Responses

In reviewing the responses there is a significant difference in the degree to which those in Further Education felt secure in their professional identity as opposed to those in Primary Education. Eight out of nine of those in Further Education gave a response that would be considered as positive, while five out of eight in Primary Education responded

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with a definite 'no' The very positive response from those within Further Education might not have been predicted, considering the concern evinced by this group regarding future employment. It could be postulated that the answer might lie not only within the nature of the institutions, but also within the confidence these individuals felt in themselves. For those in Primary Education their role may be more closely monitored and due to the National Curriculum being more results driven, which could result in on-going internal and comparative judgement. Heafford and Jennison (1998) suggested that teachers' sense of esteem had suffered because of the culture of blame 'attributed to them'. By contrast for those in Further Education where they have identified a more part-time involvement and where results are more focused on end-of- year assessments, there may be less peer/colleague pressure. In addition the FEFC regime is less punitive than OFSTED and less centred on the individual. It can not be identified as an aspect of age/maturity as there was a similar age distribution between the groups. Looking at the contrast between the two groups it might also be speculated that, as a result either of the training process, or as a result of their position as a newly qualified teacher (NQT), de-skilling could occur.

7.8.3 QUESTION 3

The respondents were asked *'Could your training have better prepared you in any way; if so, how/what were the most and least useful aspects of your training?'*

Review of Responses

In reviewing the responses it is evident that for students in both sectors teaching practice or issues related to teaching were evidenced as being of the most use, while aspects which were perceived as having a more peripheral relationship to teaching were of less value, or perhaps of less immediate use. While it is of course imperative to balance the academic needs of course delivery with the practical component, these tentative results might suggest that making the link between theory and practice more explicit might be of value to students.

7.8.4 QUESTION 4

The respondents were asked to comment on the following, *'Voice is the teacher's most important professional tool. Would you agree with this or do you feel your voice has been of limited importance overall?'*

<u>Review of Responses</u>

In reviewing the responses the researcher must acknowledge at the outset that this was a biased question and not only because her interests were known to all respondents. It is significant to note, however, that all of the respondents viewed their voice as an important professional tool, if not the most important tool. This finding is significant in the light of the results in the following chapter where a greater number of newly qualified teachers were surveyed and where a similar result was achieved. These results confirm previous findings by the researcher (Martin 1994) and should, it is suggested, add weight to the argument that voice training should be seen as an important element within teacher training.

7.8.5 QUESTION 5

Respondents were then asked *'How effective was the voice care course in preparing you for the vocal demands of teaching?'* It should be noted that most of the respondents had been recruited to the research programme through their attendance at the voice care workshops.

<u>Review of responses</u>

In reviewing the responses it is of note that all respondents found the voice care training effective. Some respondents were more enthusiastic than others, but all had gained from it. It is important to acknowledge that all those attending the course had self selected to attend (which could indicate that each had some concern/anxiety about their voice, or recognition of its importance). It is, however, also important to recognise that the training had successfully fulfilled a need when tested against the demands of the teaching role.

7.8.6 QUESTION 6

The respondents were asked the following question 'Environmental factors are implicated in vocal disorders. Which have you been particularly aware of?'

<u>Review of Responses</u>

In reviewing these responses it is evident that there are some major environmental factors within the classroom in both education sectors, namely, heat, dryness and dust, which are known to have an effect on voice quality. Poor acoustics were only cited by those in Further Education, but allied to the factors noted above, the working

environment of both groups provides an adverse vocal environment for all respondents. Even with a small sample the commonality of the experience suggests that these factors will be replicated in many other places. This environmental load needs to be considered in the light of the vocal loading noted in the following two sections.

7.8.7 QUESTION 7

The respondents were then asked, *'How many sessions have you spent teaching?'*

<u>Review of Responses</u>

In reviewing the responses the problems of the variety of response base and the varied definition of session must first be acknowledged. For those in Further Education, working practice was more varied and this reflects the difficulty already noted in gaining full-time employment or permanent contracts within this sector. For the majority of those in Primary Education full-time working was more usual; again this probably reflects the current employment situation within this sector. The temporary or more part-time nature of work within the Further Education sector must be recognised as contributing to the anxiety of those who were unable to find work and thus affecting their mental health.

7.8.8 QUESTION 8

Respondents were asked *'Was this whole class teaching, small group work, presentation or a mixture of all these?'*

<u>Review of Responses</u>

In reviewing these responses, respondents in both education sectors are generally engaged in whole class teaching for the majority of their contact time; this has significant implications for voice care and voice use. The teaching style for whole class teaching would tend to allow less time for voice rest and allied to this, large group teaching imposes vocal demands of loudness, clarity and connection with the group, which can for the vocally inexperienced lead to vocal abuse and misuse. In reviewing these results in the light of the environmental factors already identified, a picture of considerable vocal loading is emerging in both education sectors.

7.8.9 QUESTION 9

Respondents were then asked *'For how much of each session were you talking?'*

Review of Responses

In reviewing these results it is notable that only one respondent reported talking for less than 45 per cent of each session, with the majority of the respondents talking for over 60 per cent of each session (reflecting the recent findings of Ogunleye 2002). This is a considerable amount of time and thus represents high vocal demand and subsequently high vocal loading. Again these results should be seen within the framework of the environmental factors and number of sessions taught each week.

7.8.10 QUESTION 10

Respondents were then asked *'Was this generally at high volume or at a lower volume?'*

Review of Responses

In reviewing the responses it is notable that the majority of the respondents in Primary Education were consistently using a high volume, and particularly interesting that none used a low volume. In contrast, a more balanced distribution of high and medium volume was noted within Further Education, with three respondents generally using low volume. If these responses are seen within the framework of the results from the previous questions then the potential for vocal abuse and misuse for a variety of reasons consistent with classroom practice emerges quite clearly.

7.8.11 QUESTION 11

Respondents were reminded that in the past they had discussed major stress factors such as pressure of work, limited support and too much paperwork, and were asked *'Would you now view them in a different light?'*

Review of responses

In reviewing the responses it would seem that those in the Further Education sector made more specific comments about issues which were both institutional and personal in nature. For those in Primary Education less specific issues were noted but instead a more general statement regarding pressure and stress was reported (reflecting the findings of Cains and Brown 1998). It may be that this lack of identification of specific issues represents a high level of stress and anxiety where it is has become difficult to identify and distil issues. This more all-encompassing feeling of pressure could be seen as evidence of heightened anxiety and stress.

7.8.12 QUESTION 12

Respondents were asked 'What coping strategies have you used to deal with these stress factors?'

Review of Responses

In reviewing the responses there is no apparent common pattern to the way in which the respondents dealt with stress and this would be expected as stress response is very individual. Two responses to stress, that of seeking support from friends or colleagues, and taking time out or getting away from the teaching environment, were cited as a useful strategy by those within both sectors. It may be that increased and more consistent mentoring of NQTs should be considered as a useful device to offset stress and anxiety within the transitional year. Support through the offices of a mentor was indicated as desirable both by NQTs who had followed a PGCE course (Capel 1998) and those who had followed a BEd Primary course (Rea and Parkinson 1999). What is not clear is how often mentoring is generally available. The skills required to be an effective mentor are not always explicit, but Woodd (2001) has argued for increased attention in the Further and Higher Education sector to the training and development of mentors.

7.8.13 QUESTION 13

Respondents were asked *'How have you changed and developed over the past year?'*

Review of Responses

In reviewing the responses it is of interest to note that eight of the respondents cited increased confidence as a change during the year. This response is particularly interesting when one reflects that five of the respondents were in Primary Education. Paradoxically this was the group that had notably not felt confident in their professional role, (page170) yet apparently felt increased self-confidence. This finding may have implications for the way in which their professionalism is recognised within the working environment. It was less easy to define any pattern in the other responses, which related to personal change and development. A wide range of responses would be expected. The contrasts noted between those in Further Education who cited cynicism and aggression as opposed to confidence and assertiveness cited by those in Primary Education, may show a spectrum within a common trait, rather than opposing emotions.

7.8.14 QUESTION 14

Respondents were asked *'How much has the political climate compromised the teaching role?'*

Review of Responses

In reviewing the responses it would appear that both groups felt disenfranchised. In the case of those within Further Education due to the emphasis on fiscal control and funding, or in the case of those within Primary Education, due to a perception that the teaching role had been usurped in favour of a very prescriptive approach to education. These views mirror other studies where teachers expressed concern about Government involvement in educational change.(Rea and Parkinson 1999, Evans *et al* 1994, Wallace 2002)

7.8.15 QUESTION 15

Respondents were asked *'What would you do differently if you were starting this year again?'*

Review of Responses

In reviewing the responses it is evident that a high proportion, half, of those in Primary Education had concerns about the job they had accepted and wished they had not done so. By contrast only two of the 11 respondents in Further Education had concerns about the choice they had made. It is difficult to know if this disillusionment with the job was due to unrealistic expectations or the sheer volume of work. It may rather reflect the previous positive statements and contrasts noted when questioned as to their professional identity and this could be seen to have influenced their response.

7.8.16 QUESTION 16

Respondents were asked *'What specific changes in your voice quality have you noticed during the year?'*

Review of Responses

In reviewing the responses it is important to note that only six of the respondents had not noted any vocal change, so that 12 respondents had identified vocal changes, some of which were quite significant. In examining the self-reported changes that have been noted, some of the quality changes are of concern. These quality changes lend weight

to the information already noted regarding the vocal misuse and abuse demonstrated by the group during this period.

7.8.17 QUESTION 17

The PGCE (PCET) requires experience outside education as a criterion for acceptance; most of the Primary group were mature students and all had had previous employment. So, respondents were asked, *'Making a comparison with your former career, can you identify the pluses and minuses of you new career?'*

Review of Responses

In reviewing the responses it is evident that for both education sectors the complete engagement with the job was a definite plus while paradoxically this complete engagement was also a focus of discontent as there was limited opportunity to 'switch off' or get away from the job. The all-consuming nature of teaching was exemplified by the responses and it was evident that while the aspect of poor pay was identified by three of those in Further Education, it was only identified by one respondent in Primary Education. This could of course be due to the working practices within Further Education, to which the researcher has already alluded. A recent analysis by the Office for National Statistics (Owen 2002) has concluded that up to a fifth, or 84,000 teachers, 'moonlight' at weekends and during holidays to supplement their earnings.

7.8.18 QUESTION 18

Notwithstanding these responses it was of interest to note the respondents' answers to the final question *'Will you be teaching in two years' time?'*

Review of Responses

In reviewing the responses a recurrent theme emerges; those in Further Education took a much more positive view of their future within the teaching profession. Those in Primary Education were much less positive and indeed slightly ambivalent about their future. It may be possible to postulate that this response is the result of a demonstrably less satisfactory initiation into teaching. New teachers are exceptionally vulnerable to the effects of unsupportive workplace conditions and as the system does not recognise their special situation, many are leaving or becoming demoralised (Weiss 1999). It may also reflect their lack of security in terms of a professional identity and indeed aspects

such as the politicisation of teaching allied to the very heavy workload, recorded by the respondents.

7.9 SUMMARY

In reviewing the factors that have emerged as a result of the responses from both groups it is apparent that the already noted constellation of factors that affect voice quality namely physical health, mental health and environmental factors, have achieved a clearer definition. While this chapter has reviewed the responses given by the group a subsequent chapter will look at making more substantive links with all available material garnered from a variety of sources throughout this project.

CHAPTER 8

Perceptual and acoustic analysis of voice

This chapter presents findings from the perceptual and acoustic classification and evaluation of voice quality undertaken to examine changes in voice quality that occurred throughout the year, as a feature of the teaching role and professional experiences of those in the study sample.

CHAPTER 8

8.1 INTRODUCTION

This chapter will present findings from the perceptual and acoustic classification of voice recordings, and will examine these findings in the light of the changes that occurred throughout the year in the vocal quality of those in the study.

As has been previously identified (Chapter 6), changes in vocal quality are the result of a constellation of factors. Issues relating to the broad categories of physical health, mental health and professional socialisation, which are known to have causal links to vocal change, have been reported by those taking part in this study. Whether or not these factors and their effect on voice quality can be directly attributed to the professional demands of teaching is the subject of considerable world-wide study and speculation (Vilkman 1996; Smith *et al* 1997).

8.2 EVALUATION OF VOCAL QUALITY

In seeking to determine accurately whether change had occurred over time in the vocal quality of those taking part in the study, it was deemed necessary to evaluate vocal quality, not only through the use of acoustic measures but also through perceptual voice evaluation. The use of perceptual assessment, in addition to acoustic measurement, would also serve as a measurement against which the subjective reporting, through diary and initial assessment material from those taking part in the study, could be compared. This might not only offer significant information on the ability of those in the group to self-rate their own vocal quality, but also inform the researcher as to any 'perceptual gulf' that might exist between the way in which the individual perceives his or her own vocal quality and the judgement made by the researcher and expert listener. This chapter will outline the process of perceptual voice evaluation, describe how it was undertaken, and the criteria developed and used so to do.

8.3 PERCEPTUAL VOICE EVALUATION

The process of formal perceptual voice evaluation requires a listener to judge a voice sample, usually consisting of connected speech, on various parameters of voice quality.

The choice of voice quality parameters, the number of parameters used, and the mean/degrees of rating vary in different voice evaluation schemes.

In choosing perceptual voice evaluation in addition to acoustic measurement to assess change, the researcher was cognisant of the work of a number of authors, for example, Hammarberg et al (1986) and Hillman et al (1997), who suggest that perceptual voice quality ratings complement and substantiate instrumental voice quality measurements. Kent (1996) asserts that the clinician's perceptual judgements are 'the final arbiter in clinical decision making and often provide the standard against which instrumental measures are evaluated' Carding et al, (2001) suggest that 'the perceptual evaluation of voice quality enables the clinician to obtain a comprehensive overview of the individual voice, describe specific aspects of that voice and to identify and define the extent of the vocal problem'.

8.4 VOICE EVALUATION SCHEMES

It is the number and variety of voice evaluation schemes, and the plethora of terms used to describe voice quality, that have historically made reliable description of voice quality very difficult. There are no universally agreed terms of perceptual voice description; instead there are a number of different perceptual voice schemes, some of which are country specific. For example, in Sweden, most speech and language therapists use the terminology and protocol developed by Hammarberg (Hammarberg et al 1986; Hammarberg and Gauffin 1995). By contrast, Kreiman et al (1993) identified 57 different perceptual voice schemes used in the USA.

In the UK three main schemes are in use:

- The GRBAS Scale (Isshiki et al 1969; Hirano 1981). This scheme has five parameters, each representing a dimension of phonation. G represents the overall severity of voice abnormality, Grade; R represents Roughness, B represents Breathiness; A represents Asthenic (weak) and S represents Strain. A 4-point rating scale of 0 (normal) to 3 (extreme) is used for all five parameters.

- The Vocal Profile Analysis Scheme (Laver et al 1981; Wirz 1995). This is a descriptive system by which conversational or reading voice quality is analysed and

described by a trained listener. Each feature of voice is compared with a specifically defined 'neutral' baseline, and a rating figure is given for each parameter. The overall impression of vocal quality is perceived as resulting from potentially independent settings at laryngeal and supralaryngeal levels.

- The Buffalo III Voice Profile (Wilson 1987). The aims of this profile are to rate both vocal features and more general aspects of voice behaviour. This is done through analysis of 12 major aspects of voice production, namely laryngeal tone, pitch, loudness, nasal resonance, oral resonance, breath supply, muscles, voice abuse, rate, speech anxiety, speech intelligibility, and overall voice rating. A five-point equal appearing intervals scale is used where 1 means 'normal' and 5 means 'very severe' deviation.

8.5 POTENTIAL PROBLEMS RELATED TO PERCEPTUAL EVALUATION

In undertaking this task the researcher was aware of a number of potential problems related to the perceptual evaluation of voice quality. As noted above, the lack of a standard set of well-defined terms is a major problem, as each evaluation scheme uses different descriptive terms to define vocal characteristics. Terminology used is derived from a number of sources; for example, aesthetic terms, such as 'light' or 'coarse', are used by Hammarberg (Hammarberg *et al* 1980). Physiological terms related to laryngeal function, for example, 'laryngeal tension', are used by Wilson (1987) while terms related to specific acoustic features for example, 'breathiness' and 'instability' are also in use (Eskenazi *et al* 1990; Wolfe *et al* 1991). Shewell (1998) uses terms associated with personality characteristics, such as 'hesitant' and 'expressive'.

An additional problem relates to the variability of the human voice. Perceptual voice quality evaluation is most often used to determine the abnormality of a patient's voice. However, the division between normal and abnormal is often unclear because, as Mathieson (2001) notes, voice variety is limitless and standards for voice 'normality' are broad. It should also be said that no study of the vocal quality of the population as a whole exists, so no figures are available which indicate the percentage of the population who might present with vocal problems. A study by Herrington-Hall *et al*, (1988) in the USA explored the occurrence of laryngeal pathologies and their

distribution across age, sex and occupation, concluding that teaching was one of the top ten occupations of those who presented with voice problems. This does not however, afford information on the distribution across the population, so the results obtained in this study may not be used as comparative data.

The third problem relates to the reliability of perceptual voice quality rating between and within raters. Kreiman et al, (1993) suggest that, 'in order for perceptual ratings to be useful, the listener or rater must use his/her set of internal references consistently'.

Perceptual voice quality evaluation is deemed a core skill for speech and language therapists who work with voice-disordered patients, but it is agreed that perceptual rating of voice quality is a difficult task (Wendler and Anders 1986; Bassich and Ludlow 1986). While it may be likely that experienced clinicians specifically trained in perceptual voice evaluation will provide the most consistent rating of voice parameters, there is no conclusive evidence to support this supposition. (Martin 1995; Kreiman et al 1990; Kreiman et al 1992). For the purposes of this study, perceptual voice quality evaluation was seen as providing a baseline measurement of the presenting vocal quality and therefore allowing the researcher, and an expert listener, to monitor change over time. Carding et al (2001) suggest that 'It is unlikely that any formal perceptual scheme will fulfil the needs of all clinicians for all purposes' For that reason a perceptual voice quality evaluation scheme which addressed the needs of this study was developed. The evaluation process included quantifying the severity of the vocal dysfunction and allowed the identification of the component features on which each individual's vocal quality was judged. This judgement was predicated on the view that, as designated professional voice users, all those taking part in the study should ideally have vocal quality consistent with that of a professional voice user. If this was not the case, then it was anticipated that their vocal quality would reflect the vocal needs of a professional voice user; that is, to have a vocal quality which proved to be effective and efficient in the face of the demands of the teaching role.

8.6 RATING SCALE DESIGN AND MODIFICATION
The aims of the Buffalo III Voice Profile to rate both vocal features and more general aspects of voice behaviour were seen as most closely fitting the needs of this study and

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for that reason, certain aspects of the Buffalo III Voice Profile scale were adopted and modified. In designing a rating scale, rather than assessing 12 major aspects of voice production as in the Buffalo, the researcher identified ten components of vocal quality on which to assess each recording. These components were selected as they mirrored those components that would be used by clinicians to assess vocal characteristics (Martin and Lockhart 2000; Deem and Miller 2000). Assessment of these vocal characteristics would therefore provide information on all aspects of both voice and speech production. The resultant vocal quality would offer the listener a full auditory picture not only of the manner of voice production and the resultant vocal quality of each speaker, but also allow for identification of areas of tension within the vocal tract. This information would provide a robust framework for this assessment and help the researcher and expert listener to make a perceptual judgement of vocal quality.

The components of vocal quality on which to assess each recording were:

- Rate of utterance: refers to the speed of speech

- Tension within the vocal tract, at both laryngeal and supralaryngeal level: refers to muscular tension within and above the larynx

- Resonance: refers to the amplification, by the resonating chambers of the face, throat and chest, of the laryngeal 'buzz' produced by the vocal folds

- Vocal quality: refers to the overall 'sound' of the voice

- Onset of the note: refers to the manner of initial production of the sound

- Breath support: refers to the respiratory support given to the vocal folds in order to initiate voice

- Hard attack: refers to an audible adduction of the vocal folds

- Speech intelligibility; refers to the clarity of the speech

- Pitch: refers to the fundamental frequency of the note

- Severity rating: refers to the severity or otherwise of the voice disorder

A five-point graded perceptual rating scale was designed, fully described later in the chapter, where A was designated as meeting the vocal quality required of a professional voice user and E was designated as evincing vocal qualities which caused the expert listeners strong concern.

Within each category a further judgement was made, where an additional rating of plus (+) or minus (-) was given to each voice. Minus (-) indicated evidence that the features within each category were of increased severity, which edged the overall vocal quality nearer that of the rating below. Plus (+) indicated evidence of an overall vocal quality which edged the quality towards the category above.

The choice of this additional rating allowed a greater degree of refinement in terms of the rating scale and gave a more precise analysis of the voice quality. The raters cross-checked with each other and were confident that this additional marker served to increase analytical precision but did not dilute their choice of category, nor bridge the core values for each category.

In assigning each voice a particular grade from A to E, with qualifiers of plus (+) or minus (-), the listeners followed a pre-selected set of criteria. These criteria had been selected to represent the full range of vocal quality, from superior voice use to voice use that displayed aberrant vocal quality, evincing strong concern in the listeners.

8.7 RECORDING PROCESS

Each subject had been recorded vocalising on three vowels and reading a standard text entitled 'The Rainbow Passage' (Fairbanks 1960). Through the use of a standard passage, consistency across the recordings was assured in terms of length of vocalisation. An additional benefit is that the listener is not distracted by the content of the recording but is able to attend exclusively to the vocal quality, for assessment purposes. For acoustic measurement of vocal quality a standard passage is a requirement and allows for comparative measurements to be made within each speech segment.

All voice samples were recorded on digital audiotape. Each initial recording was undertaken in a television studio with relative soundproofing. The microphone, with a nylon pop shield placed 2 cm from the microphone, was set at a distance of 30 cm away from the subject. The microphone used was an AKG 451 condenser microphone. The recorder used was a Sony PCM-800 Digital Audio Recorder 16-bit linear quantization and 48Khz sampling frequency, equivalent to CD sound quality. The frequency

response of the recorder was 20Hz to 20KHz at plus/minus 0.5 dB. Of the 33 subsequent recordings for those individuals taking part in the project, 16 recordings were completed in the television studio under the same conditions. Seventeen recordings were made out of the studio, where every effort was made to ensure that there was no ambient noise. The same AKG 451 condenser microphone was used with the addition of a CKI capsule foam windshield. The recorder was a portable rather than fixed digital audiotape recorder, namely a Portadat PDR 100 with a pair of HD25 headphones.

8.8 CLASSIFICATION OF VOICE QUALITY

The components on which a perceptual judgement was made have already been identified. A number of subjective observations regarding the vocal quality of each speaker were made. These observations were used to define the category number and offer a broad descriptive classification of voice quality to each recording. This classification of vocal quality translates as follows:

A. Professional Voice User

B. 'Normal' speaker – speaker using modal voice

C. Less effective speaker

D. Speaker causing the rater definite concern

E. Speaker causing the rater strong concern

In ascribing the classification above, the raters defined certain elements within each classification to further refine and support their judgements. These elements are described below.

A Professional Voice User

- The voice is produced at a level consistent with that of a professional voice user
- Voice produced at a consistently very good to excellent level
- Individual has the ability to control vocal parameters
- Wide intonation range without perturbation from top to bottom of vocal range
- No breath loss
- Voicing continues throughout – more than usual modal voice

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- Clear closure and opening phases of the vocal folds
- Manipulation of timing, pace and pitch to suit the occasion
- Flexibility
- Any increase or decrease of loudness would be achieved within modal voice

B 'Normal' Speaker - Speaker using modal voice

- Laryngeal voice within normal limits which may include creak at the end of utterance and the end of fall
- May include breathiness
- Loudness is appropriate for the situation
- Fluent timing
- Voice is appropriate for the age and sex of the speaker
- No perceptible tension within the vocal tract
- Good onset of note – breathing and voice synchronised
- Balanced resonance
- Appropriate volume, range and intonation
- No evidence that the speaker is controlling vocal parameters

C Less Effective Speaker

- Some slight concern about the vocal quality
- Voice lacks capacity to be projected
- Voice demonstrates some voice quality problems or loudness fluctuations evidenced by at least one vocal characteristic feature occurring all of the time such as:
  - Excessive use of creaky voice
  - Noticeably breathy voice
  - Pitch breaks
  - Lack of articulatory control
  - Obfuscation of syllables
  - Lack of clarity in prosodic or articulatory ways
  - Feeling of loss of control
  - Narrow pitch range

D Speaker causing the Rater Definite Concern

- Definite concern about the voice quality evidenced by:
  - Non-normal non-modal voice quality
  - Limited pitch range
  - Excessive pitch range with voice quality changes
  - Pitch breaks
  - Breathiness
  - Much perturbation in laryngeal tone
  - Huskiness

At lease one vocal characteristic from this list occurs 50 per cent to 75 per cent of the time.

E. Speaker causing the Rater Strong Concern

- Strong concern about the vocal quality
- Strong concern about quite abnormal vocal quality evidenced by:
  - Breathing problems
  - Pitch breaks
  - Strain
  - Tension
  - Diminution in quality overall all of the time
  - Abnormal vocal quality predominates.

At least one feature occurs 75 per cent of the time.

8.9 INTER-RATER RELIABILITY

In order to ensure inter-rater consistency and reliability, a pilot tape of five voices was prepared and used to substantiate the listener judgements. So that there would be no contamination of the final results, recordings not included within the final battery of recordings were used for this purpose. Early in the design process, a period of discussion between both listeners as to their use of terminology had taken place, in order to confirm that both used terms in the same way. This process involved the use of recordings to which both listened for isolated vocal qualities. The recordings were then listened to again, and agreement was achieved regarding the use of specific terms, to

describe a specific vocal quality. In this way both listeners were confident that they were using the same terminology to describe a specific vocal quality.

The next stage in the process involved the researcher and expert listener listening to each recording and using the classification categories in order to confirm that the qualities which they identified in each voice and which they had written down, fulfilled the criteria of each category. After listening to the voice, the researcher and expert listener discussed the rating that each had awarded and gave detailed feedback to each other as to the qualities that each had noted. As both individuals are experienced listeners it was encouraging to note how similar their evaluations were for the initial recordings; very little adjustment to the rating was made. Where a difference occurred the recording was replayed and the rating was modified by agreement.

8.10 SAMPLE PROFILE OF RECORDED VOICES

It should also be noted that initial studio recordings were made of 50 students who had volunteered at that time to become part of the research group, either as 'subjects' or 'controls' Of these recordings 44 were obtained from students who had attended the voice courses offered by the researcher, six recordings were from students who had not attended a voice course and so had not had any voice training.

Subsequently, 30 of the original 50 students were unable to continue with their involvement in the study. Four students reported that for either personal or professional reasons they were unable to sustain their interest; the rest of the group did not specify their reasons.

The researcher felt that the extensive bank of initial recordings represented some very valuable data, which would provide a sample of vocal quality among final year teacher/lecturer students at an academic institution at a particular period. The researcher recognised that while this sample could not be nominated as a random sample, as the students had elected either to attend for voice training, or to be part of a 'control' group, and all were therefore self-selecting, the data would however, offer useful material. All 50 initial recordings were therefore given a perceptual rating by the researcher and expert listener and the results were analysed and are shown below.

8.11 PERCEPTUAL EVALUATION

Once assured that the listener judgements were consistent, evaluation of the recordings took place. Each recording was played once and each rater made a judgement, using the scale above, ascribing a number to each, a qualifier and in addition writing qualitative comments for each voice. If either rater felt that they needed to listen to the recording for a second time, they indicated that requirement at the end of the recording. Each voice was then ascribed a category that reflected the joint decision of the raters and a written form was completed which contained the joint comments of the raters. Where there was any difference between the raters, the recording was listened to again and resolved through further discussion. The number of times this happened was not noted but in the perception of both raters it was a relatively rare occurrence.

All subsequent recordings obtained from the 20 individuals who remained part of the study were analysed to offer the comparative data required to support or disprove the hypothesis of this research. Perceptual analysis of both initial and subsequent recordings was subjected to acoustic analysis to offer a more robust framework for discussion of changes in voice quality, and this material will be presented later in the chapter.

8.12 RESULTS

The results from this process were significant as will be demonstrated below where the result are shown in some detail. Fifty initial recordings were made in the television studio in June 1998. Of those 50 recordings 44 were of individuals who had had some voice training – either a one-day workshop or a series of lectures totalling no more than 12 hours. Six individuals had had no voice training. As has been referenced above, 20 individuals from the original 50 continued to be part of the project, 17 from the 44 who had had some voice training and three from the six who had had no voice training.

This table offers a broad band analysis of the results from all fifty initial recordings

Rating	1st recording (n=50)	6 months later (n=14)	12 months later (n=19)
A		1	
B	27	9	10
C	15	4	5
D	8		2
E			2

Table 8.1

This table offers a fine band analysis of the results from all 50 initial recordings.

Rating	1ˢᵗ recording (n=50)	6 months later (n=14)	12 months later (n=19)
A+			
A			
A-		1	
B+			2
B	20	4	5
B-	7	5	3
C+	12	3	3
C	3	1	2
C-			
D+	1		
D	5		2
D-	2		
E+			1
E			1
E-			

Table 8.2

This table offers a comparative fine band analysis indicating the rating of those who had and those who had not had training.

Rating	Training (n=44)	No training (n=6)
A+		
A		
A-		
B+		
B	15	4
B-	7	1
C+	11	1
C	3	
C-		
D+	1	
D	5	
D-	2	
E-		
E		
E-		

Table 8.3

8.13 PERCEPTUAL VOICE QUALITY RATING OUTCOME

The most significant result and one which should be stated at the outset, is that of the 50 recordings none was given a rating of A, that is, in the opinion of the raters, meeting the criteria of professional voice user standard.

The results indicate that only 54 per cent of those individuals who took part in the recording were given a perceptual voice quality rating that was considered to 'be within normal limits' or to have modal voice quality. Of the remainder, 30 per cent were given a perceptual voice quality rating of C, as indication of slight concern by the raters, while 16 per cent were given a perceptual voice quality rating of D, which indicated definite concern on the part of the raters.

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8.14 PROFESSIONAL DESIGNATION

Dividing the group into their future professional designation as within the Further Education (FE) or Primary Education (PE) sector, the following results were obtained.

Out of a total of 32 Further Education students:

Seventeen were awarded a score of B

Eleven were awarded a score of C

Four were awarded a score of D

These results indicate that only 53 per cent of those individuals within the FE group were given a perceptual voice quality rating that was considered to be 'within normal limits' or to have modal voice. Forty-seven per cent of the FE group were given perceptual rating scores of C or D, which are indications of slight or definite concern on the part of the raters.

Out of a total of 18 Primary Education students:

Ten were awarded a score of B

Four were awarded a score of C

Four were awarded a score of D

8.15 REVIEW OF RESULTS

These results indicate that only 55 per cent of those individuals within the Primary Education sector were given a perceptual voice quality rating that was considered to be 'within normal limits' or modal voice. Forty-four per cent of the Primary Education group were given ratings of C or D, which indicates slight or definite concern on the part of the raters. The distribution of results shows a very close distribution if C and D ratings are aggregated.

It is important to view these results in the light of the vocal demands that are placed on teachers' voices, which were discussed in some detail in Chapter 3. For that reason, it is deemed highly significant that, of the 50 prospective teachers who were recorded just after they had completed their training, only 54 per cent were awarded a perceptual grading that was perceived to be 'within normal limits' While it would be unwise to

generalise from this small study, it could suggest that the vocal demands of teaching may prove to be a considerable burden for this group. These findings will be discussed in more detail in Chapter 10.

Of the 50 individuals who were recorded initially, 20 continued as part of the study. Of these, 17 had been given voice training and three had not. For comparative purposes, this group, as with the original group, was divided into two sections according to their future professional designation within Further Education (FE) and Primary Education (PE). The following results were obtained.

Out of a total of nine Further Education students:

      Six were awarded a score of B

      Two were awarded a score of C

      One was awarded a score of D

These results indicate that 66 per cent of the group within the Further Education sector were given a perceptual voice quality rating that was deemed to be 'within normal limits' Thirty three per cent of the group were, however, given a perceptual voice quality rating which indicated slight or definite concern on the part of the raters.

Out of a total of eight Primary Education students:

      Four were awarded a score of B

      Two were awarded a score of C

      Two were awarded a score of D

The results indicate that 50 per cent of the group within the Primary Education sector were given a perceptual voice quality rating which was 'within normal limits' Fifty per cent were given a perceptual voice quality rating that indicated slight or definite concern on the part of the raters.

As discussed earlier in the chapter, further recordings were made of the 20 individuals who remained as part of the study. This recording was done at six-monthly intervals; in December of the same year and then in June or July of the following year - the timing

was dependent on the date of the end of the individual's academic term. Where possible, every attempt was made to record each individual at, or as near to, the end of term as possible. In this way, it was hoped that the recording would accurately capture vocal quality that was not influenced by a period away from the classroom. With one individual this was not possible and a period of a week elapsed between the end of term and the recording. It was not possible to record each individual on both subsequent occasions, so for six individuals only one subsequent recording was made, in June or July. In addition one individual, who had been recorded in December, could not be recorded in the summer.

8.16 ASSESSMENT OF CHANGE IN VOCAL QUALITY THROUGHOUT THE YEAR

As all voice samples had been given a perceptual voice quality rating score, it was possible to assess changes in voice quality and to track differences during the 12-month period. In scoring the voice samples the raters were unaware of previous scores in order to guard against any listener bias that might have occurred if knowledge of a previous score was available.

Of the nine individuals within the Further Education group:

- Two were perceived by the raters as becoming 'worse' during the year, or given a lower score
- Four individuals retained the same score during the year.
- Two individuals demonstrated positive vocal change throughout the year and were given higher scores by the raters.
- One individual demonstrated negative vocal change at the six months' December recording, but then reverted to their initial rating score at one year, the June/July recording period.

These results indicate that 33 per cent of the group within the FE sector demonstrated negative voice quality change throughout the year. Forty-four per cent retained the

same voice quality perceptual score throughout the year. Twenty-two per cent demonstrated positive voice quality change throughout the year.

It is significant to note that of those individuals who demonstrated negative vocal change throughout the year only one could have been perceived as having a voice that was 'at risk', in other words presenting with a 'low' initial score of C+. Of those who presented with positive vocal change throughout the year one presented with a very 'low' initial score, D+.

Of the eight individuals within the Primary Education group:

- Five individuals demonstrated negative vocal change throughout the year and were given a 'worse' or lower score by the raters.
- Two individuals demonstrated positive change throughout the year and were given higher scores by the raters.
- One individual demonstrated positive vocal change at the December recording but then reverted to their initial rating score at one year, the June/July recording period.

These results indicate that 75 per cent of the group within the Primary Education sector demonstrated negative vocal change throughout the year. Twenty-five per cent retained the same voice quality perceptual score throughout the year.

It is significant to note that of those who presented with negative vocal change throughout the year only two presented with scores that could have indicated a voice 'at risk', that of C+ and D.

In the group who had not received any voice care:

- Two individuals retained the same score throughout the year.
- One individual demonstrated negative vocal change at the December recording and this individual was not able to be re-recorded in June / July.

As this group is so small it is statistically unreliable but in order to maintain the same reference points the percentage scores are included. Therefore these results indicate

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that 66 per cent retained the same perceptual voice quality score throughout the year. Thirty-three per cent demonstrated negative vocal change.

8.17 VOCAL CHANGE THROUGHOUT THE YEAR

The following graphs show the individual vocal changes that occurred within the year. The results have been assigned to the relevant sectors either Primary Education, Further Education or to the control group.

Vocal Change: Further Education Sector

	0	6 Months	12 Months
A+			
A			
A-			
B+		F3	F5
B			F6 / F8
B-	F4		F1
C+	F9		F7
C			
C-			
D+			F2
D			
D-			
E+			
E			
E-			
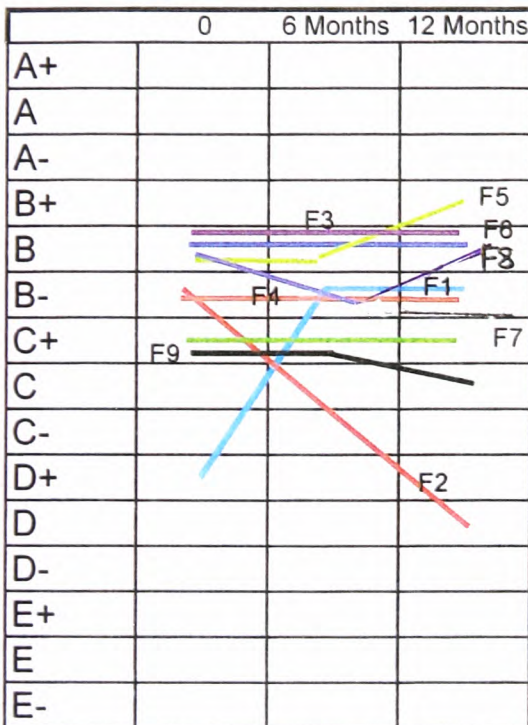
Vocal Change: Primary Education Sector

	0	6 Months	12 Months
A+			
A			
A-			
B+	P5		P6
B			
B-			P1
C+		P7	
C			
C-			
D+	P2		P8
D			
D-			
E+		P4	
E			
E-			
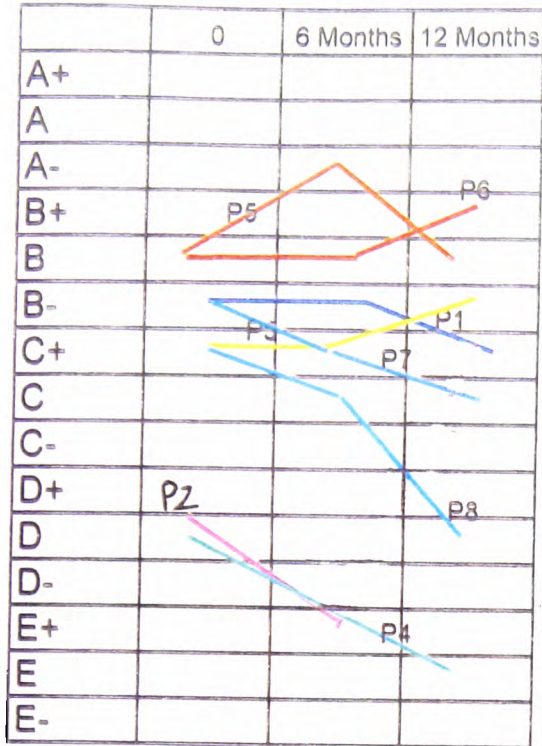
Vocal Change: Control Group

	0	6 Months	12 Months
A+			
A			
A-			
B+			
B			FN2
B-		FN3	
C+			FN1
C			
C-			
D+			
D			
D-			
E+			
E			
E-			

197
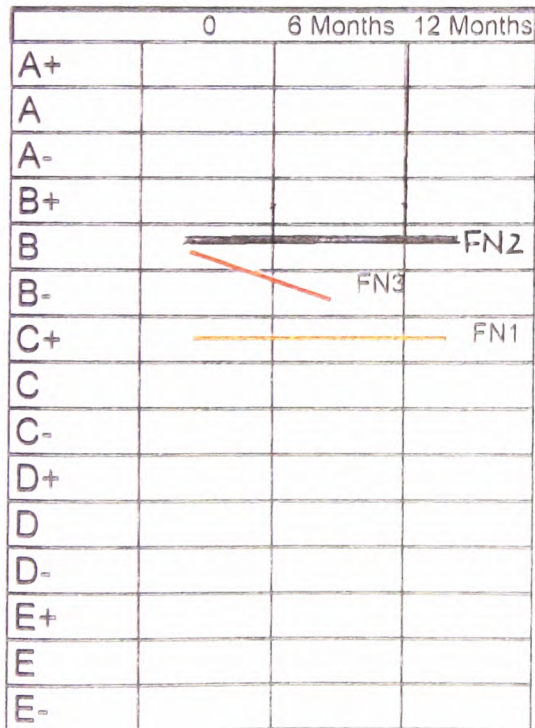
8.18 ACOUSTIC ANALYSIS

All voice samples were recorded on digital audiotape. In order to look at the acoustic properties of the recordings, the sound files were sampled using a Creative Labs live drive using Cool Edit version 96.

The sound files were sampled at 22.05 kHz so that they took just under 22,000 samples/second. The files were then encoded as Windows Wave files (.Wav) These files were subsequently analysed for amplitude, spectrographic profiles and fundamental frequency using SFS/WASP Version 1.0 www.phon.ucl.ac.uk/resource/sfs/wasp.htm owned by Mark Huckvale.

The trace material, from which a hard copy was obtained, shown in Appendix 11, was then assessed by the researcher and the expert listener and compared to the perceptual assessment already completed. The results from this allowed the following comparison.

PERCEPTUAL EVALUATION AND ACOUSTIC EVIDENCE

Subject and Recording	Perceptual rating	Perceptual evaluation	Acoustic evidence
F1.1	D+	Under resonated: harmonics absent? Breathy Pitch break Lack of firm adduction of the vocal folds Reduced pitch range	Absent harmonics in excitation? – see vowels (as result of breathy voice and related lack of adduction) Creak evident at onset as noted – also throughout – with much low frequency voice appearing in fundamental frequency analysis
F1.2	B-	Weak Good intonation Sometimes at bottom of range	Again, the vowel trace is faint, suggesting absent harmonics in the excitation resulting in weak formants illustrates weak voice quality. One of the single vowels is incorrectly measured as an octave shift, which may also be related to the poor voice quality. Creak appears again – e.g. at onset of Rainbow Passage – indicating that the speaker is voicing at the bottom of her range
F1.3	B-	Creak Bottom of range on occasion	Creak still evident but possibly less than for other recordings
F.2.1	B-	Breathy Lack of support Creak	Low fundamental frequency indicates creak, or is possibly an artefact of poor excitation, meaning that not all glottal pulses are detected.
F2.2	D	Breathy Lack of support Creaky	Second recording reflects similar indications as for F2.1 – note fundamental frequency for vowels – which seems to drop by a whole octave for one vowel - but does not reflect the auditory impression which is of similar pitch – therefore this is interpreted as artefact of poor excitation, meaning that not all glottal pulses are detected

Perceptual evaluation and acoustic evidence continued:

F5.1	B	? something intonational possibly related to more use of nuclear pitch changes than normal	
F5.2	B	Strong Good support	Clear trace with good pitch movement
F5.3	B+	Good quality Creak at end of fall In right register Rapid delivery	Clear trace with good pitch movement No excessive creak noted
F.6.1	B	Alveolar and post-alveolar fricatives Articulatory features noted Voice quality per se unremarkable	Absence of separate low-frequency range accords with voice quality assessment Other perceptual features noted were articulatory and would not affect the pitch trace
F6.2	B	Articulatory features Easy voicing Slight query regarding support	Note similarity of all three recordings Recording 2 shows less clear formants for vowels which could be related to the perceptual comment about breath support
F6.3	B	Articulatory features –improved during phonation Secure	No further evidence: see above
F7.1	C+	Lack of breath support Creak Tense production Low pitch range	Weak voice – low amplitude of signal? Low pitch and creak shown. Vowel pitch changes do not match auditory impression of similar pitch – and may be an artefact in measurement resulting from poor voice quality
F7.2	C+	Creak through whole words ? breath support Not much power in voice Intonation normal Tense quality	Intonation: a good range of pitch movement

Perceptual evaluation and acoustic evidence continued:

F8.1	B	Creak evident on occasions, mainly at the beginning of the Rainbow Passage	All the three recordings for this speaker show wide pitch variation for the different vowels, whereas auditorily they seem to have the same pitch. This is presumed to show incorrect measurement, or an artefact produced by the recording amplitude levels Creak evident in the trace
F8.2	B-	Began well – deteriorated slightly Became lower Good intonation Some very good voice May not be in right register	Evidence of high pitch supports the possibility that she may not be in the right register – e.g. 'When the sunlight strikes ...'
F8.3	B	Within normal limits Clear Good range	Problems with vowel measurement as noted above Pitch movement for the Rainbow Passage supports the comments about range
F9.1	C+	Good range of intonation Creak Tension + High pitch Articulatory tension Speeding up for part of utterance ? breath support	Wide intonation range is very clear on trace Much separate low-pitch register – evidence of creak
F9.2	C+	Very high Tension Breathy Creak on lower note Not in correct register	Second recording higher than first + creak
F9.3	C	High pitched Tension Creak Some voice loss	At least as high as F9.2 +creak

Perceptual evaluation and acoustic evidence continued:

P1.1	B-	High pitch Breathy Weak Limited pitch range No auditory creak	High fundamental frequency as marked Separate low register for vowels seems to be an artefact of measurement in the presence of breathy voice quality. Auditory pitch checked and agreed to be identical for vowels.
P1.2	B-	Tension ? register a little high ? breath support	Less of the separate low range than for the other two recordings and somewhat less pitch movement than for Recording P1.1 (but more than for recording P1.2)
P1.3	C+	Very breathy Not in right register Tone - limited intonation Narrow pitch range	Narrow pitch range and limited intonation – evidence in relatively flat trace
P2.1	D	Very 'held' voice (i.e. tense) Lack of power Lack of support Limited range Creak Very tense	Much evidence of creak in low separate range of fundamental frequency trace
P2.2	E+	Low pitch Held larynx Intonation limited Loses voice Out of register ?diplophonia – e.g. 'with its path high above'	Fundamental frequency trace much lower than for first recording – support for observation of low pitch and 'out of register' Evidence of creak much reduced Pitch jumps appearing for vowels were re-checked auditorily and seem to be an artefact of measurement in the presence of voice limitation Evidence of voice loss in part of the Rainbow Passage

Perceptual evaluation and acoustic evidence continued:

P6.1	B	Not very powerful Slightly high Good intonation	All three recordings have evidence of good quality voice – clear trace on the whole. Some creak but not excessive? The Rainbow Passage illustrates pitch movement related to good intonation Vowels: measurement does not match auditory perception and may be an artefact resulting from low input level.
P6.2	B	Good within normal limits Clear voice Good intonation	Evidence of good quality voice – clear trace on the whole. Some creak but not excessive?
P6.3	B+	Clear Generally well balanced Good movement around the note	All three recordings have evidence of good quality voice – clear trace on the whole. Some creak but not excessive?
P7.1	B-	Lack of clear note Low register ?Creak ?Husky Limited range	Low fundamental frequency supports comments about low pitch and limited pitch range, for all 3 recordings Creak – voice is predominantly low pitched and within the possible range for creak.
P7.2	C+	Very low pitch Very breathy Roughness persists Bottom of register Breathy throughout ?Lack of hydration Power and range	Low fundamental frequency supports comments about low pitch and limited pitch range
P7.3	C	Speed Very low pitch, at bottom of register Intonation	Low fundamental frequency supports comments about low pitch and limited pitch range

Perceptual evaluation and acoustic evidence continued:

FN2.1	B	Clear Good voice quality Slightly high	Clear trace on the whole – evidence of good voice quality Some high pitch
FN2.2	B	Within normal limits Good intonation	As above – less creak Spurious pitch jump for vowels not supported by perceptual evaluation and is probably an artefact
FN3.1	B	Breathy Good intonation Hard attack	Evidence of wide pitch range and good intonation, with high top of range Low additional range may be evidence of breathy voice and weakness (i.e. measurement problems in the context of poor voice) rather than creak
FN3.2	B-	High Breathy Weak Hard attack for vowels particularly	Evidence of wide pitch range and good intonation, with high top of range Low additional range may be evidence of breathy voice and weakness (i.e. measurement problems in the context of poor voice) rather than creak

8.19 SUMMARY

This chapter has outlined the process undertaken by the researcher to analyse the voice recordings provided by the student body. The use of acoustic data has provided new insight into the vocal quality of those within the study, and in turn, this acoustic data has offered evidence to support the perceptual evaluation of voice quality.

The chapter has shown the extent of the vocal change experienced by the newly qualified teachers/lecturers. It has provided significant information regarding the vocal status of a number of students who at the time of the recording had completed their teacher training courses and would within the next three months be entering the very vocally challenging school or college environment.

The results from this study showed that only 54 per cent of the prospective teachers presented with a vocal quality which, in the view of the researcher and expert listener,

was within normal limits. In a study conducted in the former German Democratic Republic, Schleier, (1975), 3903 phoniatric fitness examinations were carried out. All applicants for careers in teaching, education, kindergarten teaching, speech training, interpreting, acting, singing or similar careers were required to undergo a voice and speech examination before applying for the respective course. Schleier's assessment, which included a battery of tests and a laryngeal examination, found that 14 per cent of the female and 11 per cent of the male applicants were phoniatrically unfit. This contrasts with the 46 per cent that were 'unfit' in this study, although it should be noted that laryngeal examination was not undertaken in the current study, so it was not therefore possible to assess the status of the larynx. It is, however, accepted that the 'sound' of the voice does not necessarily reflect laryngeal health, previous chapters have indicated that a disordered vocal quality may arise from psychogenic causes or muscle tension disorders which are not reflected in laryngeal appearance. It is therefore not possible to make a direct comparison of the results obtained by this study and that of Schleier's. Political change in Germany means that this assessment of vocal fitness is no longer required, but in the opinion of the researcher vocal fitness is a critically important consideration before embarking on a career in teaching with the noted attendant problems, as this study has illustrated.

As has been shown, many of these students in this study were not vocally robust and it could be anticipated that many would find their voice inadequate for the demands of their future career. While not advocating rejection on the grounds of lack of vocal fitness, prior assessment and acknowledgement of a potential problem could form the basis of some prophylactic intervention during training.

CHAPTER 9

Postal Questionnaire

This chapter will examine the responses to a postal questionnaire sent to teachers and lecturers during their first year post-qualification. It illustrates the extent to which the respondents identified a change in their perception of the need for voice care, of voice use and of voice maintenance pre- and post-qualification.

In addition it highlights the number of hours per week that newly qualified teachers and lecturers are expected to work.

CHAPTER 9

9.1 INTRODUCTION

This chapter will look at the responses received from a postal questionnaire sent to a number of past students at the University of Greenwich, from the 1999 student cohort.

Recording evidence of vocal change throughout the first year of teaching has been addressed in Chapter 8. Previous chapters presented material from questionnaire responses, which offered ethnographic detail on those taking part in the study. Some of this material was used to highlight potential prognostic indicators for voice change throughout the first year of teaching. Chapter 7 presented material collected from semi-structured interviews, which offered more personal accounts of the transitional phase from student to professional which takes place during the first year post-qualification. The interviews also invited comment on vocal change, which had been noted by those within the study, those respondents who qualified in 1998.

9.2 DATA COLLECTION

Commentary on the aspect of the research design, which meant that those who took part in the project had, to a great extent, self-selected, has already been made in Chapter 4. In order to guard against undue bias in the findings, the researcher gathered additional data on voice issues from the student cohort who had completed their training in the summer of 1999. Students from the School of Post-Compulsory Education and Training, who had completed a course which qualified them to teach within the Further Education sector, and students from the School of Education, who had completed a degree which qualified them to teach within the Primary Education sector, were asked to respond to a postal questionnaire. The students who were surveyed were those who had signed a written agreement with the university which permitted the university to approach them for information post-qualification and who had been successful in gaining employment. It could therefore be said that here, too, the respondents had to some extent self-selected by virtue of their success in finding employment.

Fifty-nine questionnaires were sent to students from the School of Education, 30 questionnaires were sent to students from the School of Post-Compulsory Education and Training. The Schools at the University of Greenwich, from which the respondents were selected, were chosen to reflect the training, experience and qualifications of those who were already part of the project. In that way a more robust comparison could be made of post-qualification experience.

9.3 RESPONSE TO QUESTIONNAIRES

Thirty-one responses from the first mailing to the Primary Education graduates were received and 16 responses from the first mailing to the Post-Compulsory Education and Training graduates. After four weeks a second letter was sent to all those who had not responded, a total of 42 letters, and from this second mailing seven responses were received from those in Post-Compulsory Education and Training and ten responses from those in Primary Education. In total, 64 responses from a mailing of 89 were received. This represents a response rate of 72 per cent, which is deemed to be very high for a postal survey, where a response rate of between 5 and 15 per cent is generally seen as successful, (Denscombe 1998).

The researcher can offer no reason for the high response rate, although the respondents had agreed to be approached, but is of the opinion that it may have been that the questionnaire triggered some issues related to voice and voice use which had been of concern to respondents. This would mirror the responses profiled in Chapter 7. This questionnaire may have allowed respondents to acknowledge difficulties and, indeed, 12 respondents included additional personal comments on their voice and vocal experience on the questionnaires. It could, however, be a feature of a professional group, with recent experience of academic study, who were sympathetic to the difficulties in accessing research evidence and therefore decided to participate.

Three questionnaires were completed anonymously so did not give details of gender, one questionnaire did not give details of the education sector in which the individual was teaching and four did not provide details of the qualification gained. The pie chart overleaf refers only to those who stated either BEd or PGCE in their response.

Respondents did not always complete every section of the questionnaire and it is for that reason that the responses for each question may not always total 64. Pie charts of the results are shown below.
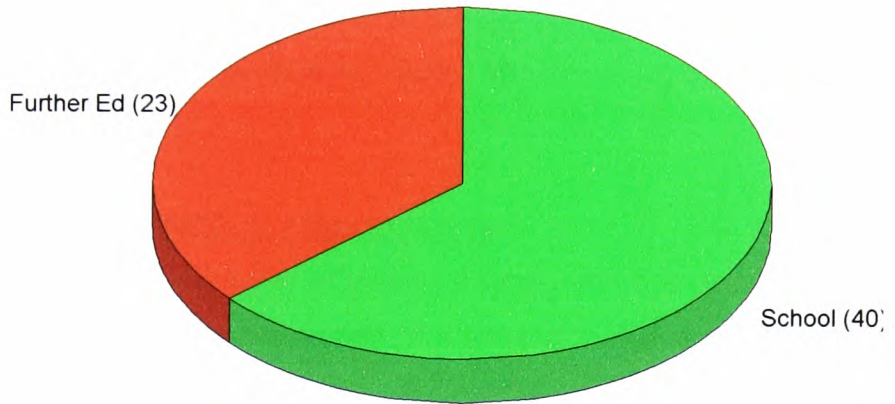
School or Further Education

Further Ed (23)

School (40)
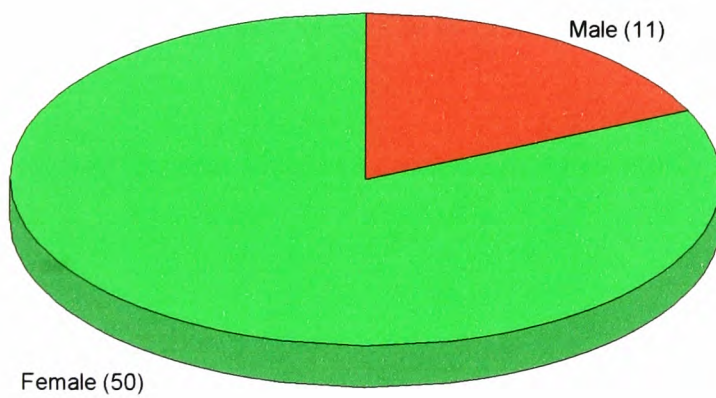
Sex of respondents

Male (11)

Female (50)
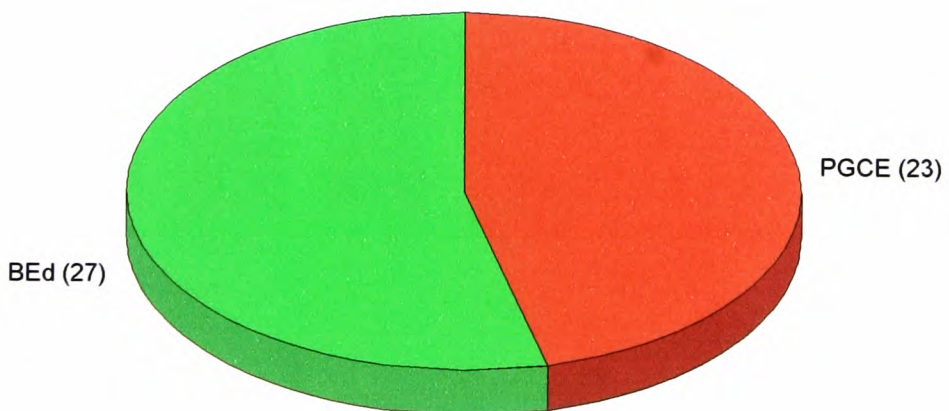
Qualifications of respondents

PGCE (23)

BEd (27)

It was intended that this information would augment the findings from the subject group and identify areas that were of concern to all. The researcher was also interested to identify any areas of difference between the groups in terms of the education sector in which they were working and also with regard to any age differences that emerged. This had come through in the previous work, so a design feature was emerging from 'work in progress'.

9.4. QUESTIONNAIRE DESIGN AND CONTENT

The questionnaire had been designed to evaluate the respondents' awareness of their own voice and to assess changes that might have occurred in their perception of the importance of their voice, their voice use, vocal hygiene, vocal maintenance, and vocal resilience during the first year post qualification. The researcher was also interested to note whether the respondents might have liked to have had advice on voice care, voice use and voice maintenance during training. Evidence of a link between age and level of concern was also sought. The age distribution of those who returned the questionnaire is shown below.
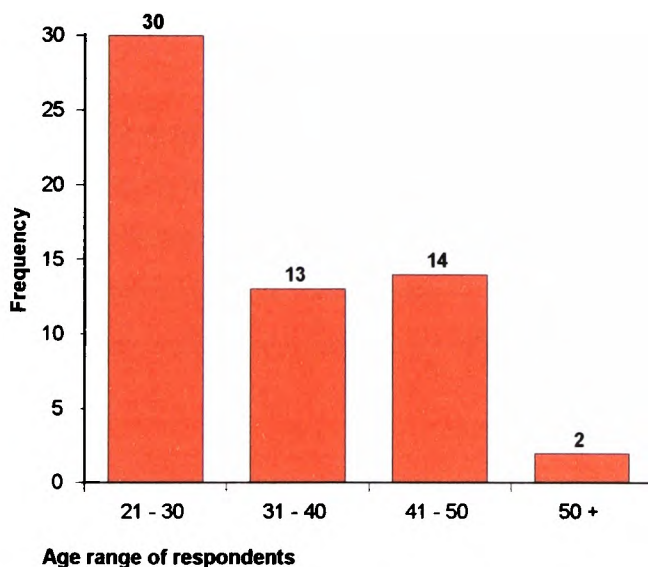
9.5 QUESTION FOCUS

9.5.1. RELATIONSHIP WITH THEIR VOICE

Respondents were asked to comment on their relationship with their voice before and since starting to teach.

9.5.1.1. Respondents were asked if they had <u>thought</u> about their voice.

<u>Before</u> starting to teach:

- Thirty-four respondents had never thought about their voice
- Eighteen respondents had occasionally thought about their voice
- Three respondents had often thought about their voice

<u>Since</u> starting to teach:

- Three respondents had never thought about their voice
- Thirty-two respondents had occasionally thought about their voice
- Twenty-three respondents had often thought about their voice

9.5.1.2. Review of Results

In reviewing these results it is apparent that there had been a very considerable shift in the vocal awareness of respondents before and after starting to teach.

9.5.1.3. Respondents were asked if they had <u>worried</u> about their voice.

<u>Before</u> starting to teach:

- Forty-four respondents had never worried about their voice
- Ten respondents had occasionally worried about their voice
- No respondent had often worried about their voice

<u>Since</u> starting to teach:

- Thirteen respondents had never worried about their voice
- Thirty-one respondents had occasionally worried about their voice
- Seven respondents had often worried about their voice

9.5.1.4. Review of Results

In reviewing these results it is of concern to note the significant reduction in those respondents who never worried about their voice and the significant increase in those respondents who, as a result of starting to teach, now worried about their voice both often and occasionally.

9.5.1.5. Respondents were asked if they had <u>lost</u> their voice.

<u>Before</u> starting to teach:

- Thirty-two respondents had never lost their voice

- Twenty-one respondents had occasionally lost their voice

- Two respondents had often lost their voice

<u>Since</u> starting to teach:

- Twenty-two respondents had never lost their voice

- Thirty-two respondents had occasionally lost their voice

- Two respondents had often lost their voice

9.5.1.6. Review of Results

In reviewing these results it may be seen that since starting to teach ten more respondents from the group agreed that they had occasionally lost their voice. If this figure of 32 respondents (which represents half the respondents) were to be generalised to the whole teaching population, the numbers affected in the United Kingdom would be of great concern.

Figures currently available from the Department of Education and Skills (2001) report full-teacher numbers in Nursery and Primary Education for 1999/2000 as 211,100. In part-time posts there are a further 20,000 teachers. In Secondary Education (a group with which this project has not been concerned) there are 223,000 teachers in full-time posts with 17,300 in part-time posts while in Further Education there are 55,000 full-time teachers, with 76,000 in full-time posts in Higher Education in the United Kingdom.

While is not appropriate within the context of this project to speculate, using the findings from the samples described above, half of the total number of 602,400 teachers would represent in excess of 300,000 teachers who occasionally lost their voice and 10,000 teachers who often lost their voice.

9.5.1.7. Respondents were asked if they had had to rest their voice.

Before starting to teach:

- Forty-one respondents had never had to rest their voice
- Eleven respondents had occasionally had to rest their voice
- One respondent had often had to rest their voice

Since starting to teach:

- Fourteen respondents had never had to rest their voice
- Thirty-one respondents had occasionally had to rest their voice
- Seven respondents had often had to rest their voice

9.5.1.8. Review of Results

In reviewing these results there is a significant decrease in the number of respondents who never had to rest their voice. Well over half of the respondents, occasionally or often, had to rest their voice after one year of teaching. Only a little over 20 per cent of the respondents had never had to rest their voice. It is of concern to note the low percentage of respondents within their first year of teaching who had not been able to withstand the vocal demands of the teaching role.

9.5.1.9. Respondents were asked if they had ever not been able to speak ....

Before starting to teach:

- Thirty-nine respondents had never not been able to speak
- Ten respondents had occasionally not been able to speak
- No respondent had often not been able to speak

Since starting to teach:

- Thirty-two respondents had never not been able to speak

- Ten respondents had occasionally not been able to speak

- One respondent had often not been able to speak

9.5.1.10. Review of Results

In reviewing these responses, it is encouraging to note an increase of only one individual who had often not been able to speak since starting to teach. If this result, however, is viewed within the framework of the established agreement that voice is the most (or one of the most) important professional tools, voice loss will inevitably considerably compromise the teaching role for this individual. The responses for this section are significant in terms of the respondents' professional role, in that ten individuals had experienced occasional episodes where they had not been able to speak.

Summary results are shown overleaf.
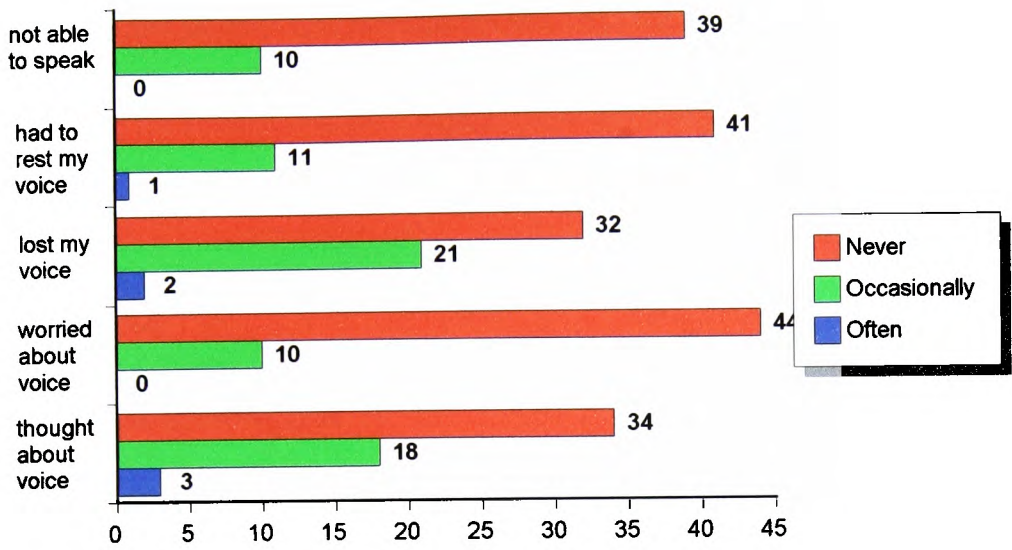
Before Teaching

Since Teaching

218
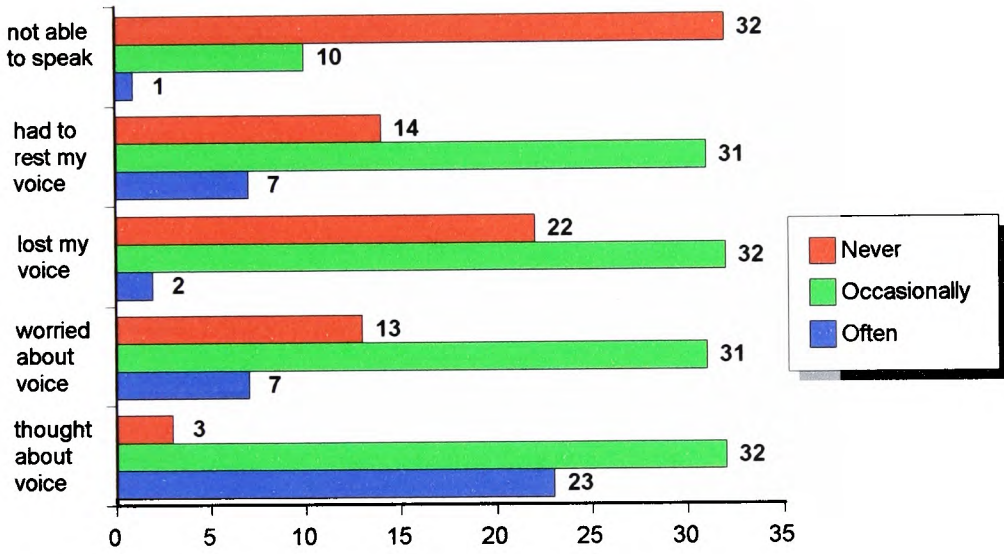
9.6. AGE DISTRIBUTION AND QUESTIONNAIRE RESULTS

In looking at the age distribution of those respondents who completed the relevant sections of the questionnaire, the following charts show the age distribution and results.
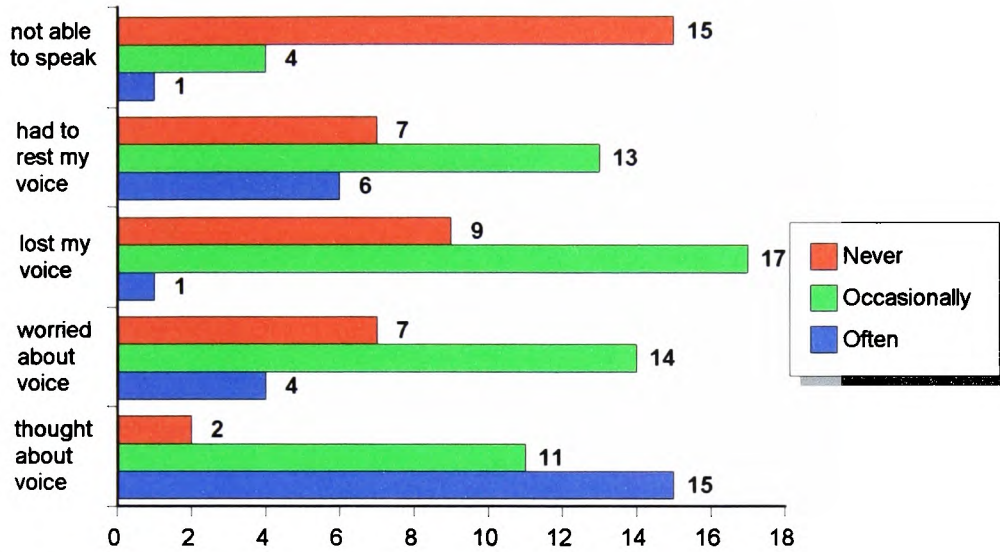
Since Teaching - Age range 21-30
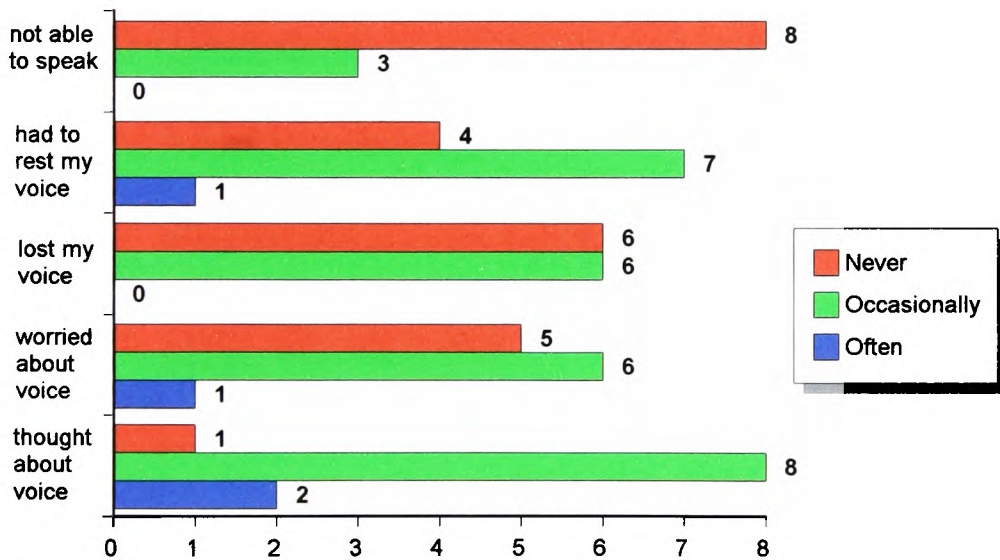
Since Teaching - Age range 31- 40
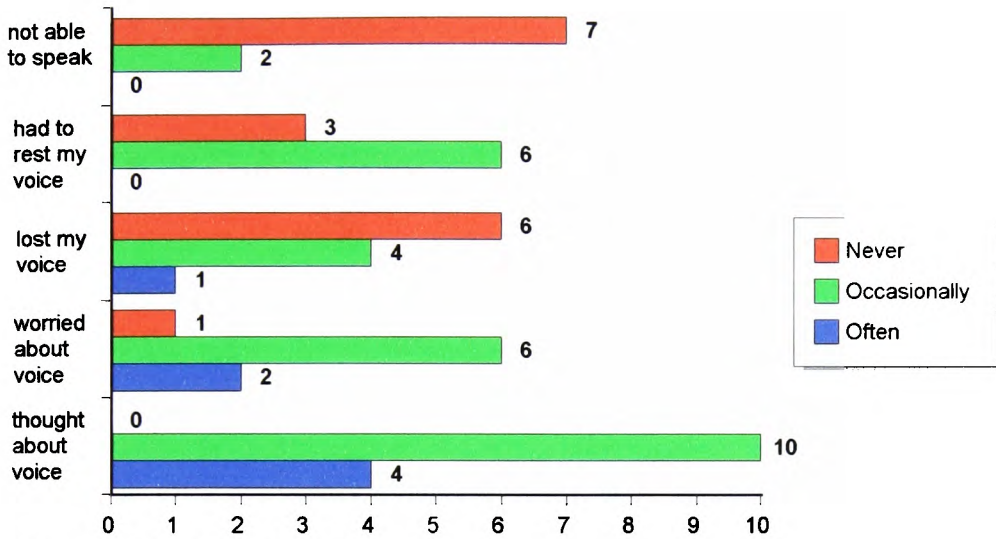
Since Teaching - age range 41 - 50
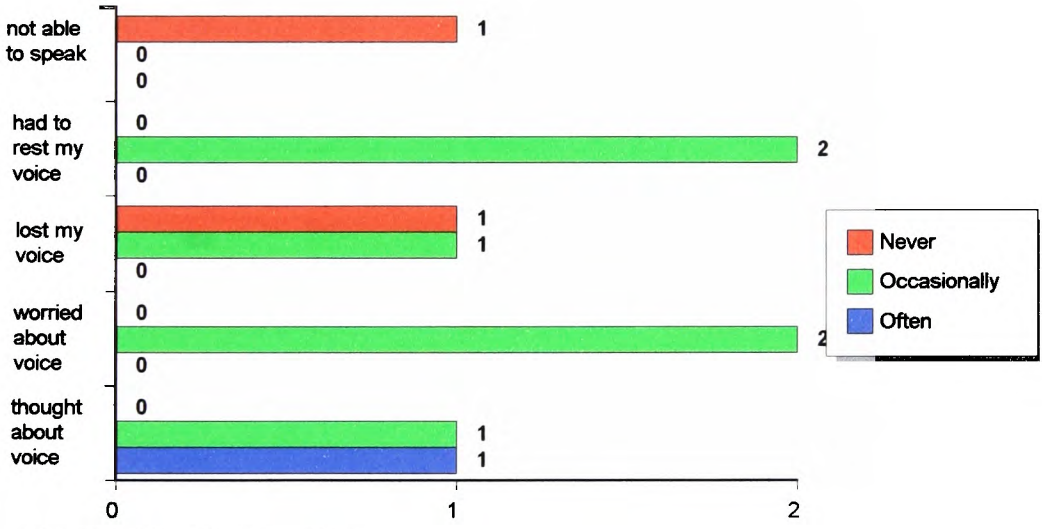
Since Teaching - Age range 50+

Age distribution and results in table form are included below.

Age Distribution Results (1)

Age	Often thought about voice	Often worried about voice	Often lost voice	Often had to rest voice	Often not able to speak	Number
21-30 years	83%	22%	5%	17%	5%	18
31-40 years	25%	12%	0%	12%	0%	8
41-50 years	40%	20%	10%	0%	0%	10
50+ years	50%	0%	0%	0%	0%	2

Table 9.1

It would appear that those within the 21-30 year age range thought about their voices more often than any other age band. They also worried more often about their voice and had to rest their voice more often than respondents in any other age band. Those in the 41-50 age band lost their voice more often than those within the other age bands. These results were unexpected, as the researcher would have expected those within the older age range to express more concern about their voice. It may be that the younger teachers were more likely to be working within the Primary Education sector where the vocal demands are greater. Evidence for this will be shown more clearly later in this chapter and has additionally been noted from the responses given to the researcher and discussed in Chapter 7.

If, at this early stage in their careers, the group are expressing concern about their voices, it could indicate that they are already experiencing vocal problems. If this is the case then these results could indicate concern on the part of the respondents as to their ability to sustain voice during the length of their future professional career.

Age Distribution Results (2)

Age	Occasionally thought about voice	Occasionally worried about voice	Occasionally lost voice	Occasionally had to rest voice	Occasionally not able to speak
21-30 years	61%	77%	94%	72%	22%
31-40 years	100%	75%	75%	86%	36%
41-50 years	100%	60%	40%	60%	20%
50+ years	50%	100%	50%	100%	0%

Table 9.2

It would appear that those within the 31-40 age range and those within the 50+ age range were most likely to occasionally think about their voice. Those in the 31-40 year

range more occasionally needed to rest their voice and more occasionally were not able to speak than those within the other age ranges.

Those within the 50+ age range occasionally worried about their voice more and occasionally had to rest their voice more than any other group. Those within the 21-30 age range occasionally lost their voice more than any other group and this result underlines the issues raised by Table 9.1 with reference to this age group.

Age Distribution Results (3)

Age	Never thought about voice	Never worried about voice	Never lost Voice	Never had to rest voice	Never not able to speak
21-30 years	11%	38%	50%	39%	88%
31-40 years	12%	62%	75%	50%	100%
41-50 years	0%	10%	60%	30%	70%
50+years	0%	0%	50%	0%	0%

Table 9.3

A small percentage of respondents within the 21-30 age range had never thought about voice. The most vocally robust group would appear to be those within the 31-40 age range. Their responses indicated a higher percentage of those in this group who had never thought about voice, never worried about voice, never lost their voice, never had to rest their voice, and never had not been able to speak than in any other age group.

As a comment on these results it should, however, be noted that those respondents in the 50+ age range were very small in number, so this will have made the results less reliable.

Of particular interest however was the fact that those within the 21-30 age range might have been expected to be more vocally robust, so these findings are important with respect to the undifferentiated nature of voice concerns within the teaching profession.

9.7 CHANGES IN VOICE QUALITY SINCE BEGINNING TO TEACH

Respondents were asked to comment on any changes that in their opinion had occurred in their vocal quality since they began to teach. Respondents identified change in pitch,

huskiness, flexibility, breathiness and harshness, and these are shown below as a percentage of the total responses.

- 1 per cent of respondents noted that their pitch had risen
- 17 per cent of respondents noted that their pitch had lowered

- 39 per cent of respondents noted that their voice had become slightly husky
- 3 per cent of respondents noted that their voice had become very husky

- 56 per cent of respondents noted that their voice had become a little strained
- 5 per cent of respondents noted that their voice had become very strained

- 23 per cent of respondents noted that their voice had become more flexible
- 12 per cent of respondents noted that their voice had become less flexible

- 8 per cent of respondents noted that their voice had become more breathy
- 3 per cent of respondents noted that their voice had become less breathy

- 19 per cent of respondents noted that their voice had become more harsh

Information on noted vocal quality change is included below.

Since teaching the voice has become

Since teaching the flexibility of the voice has become
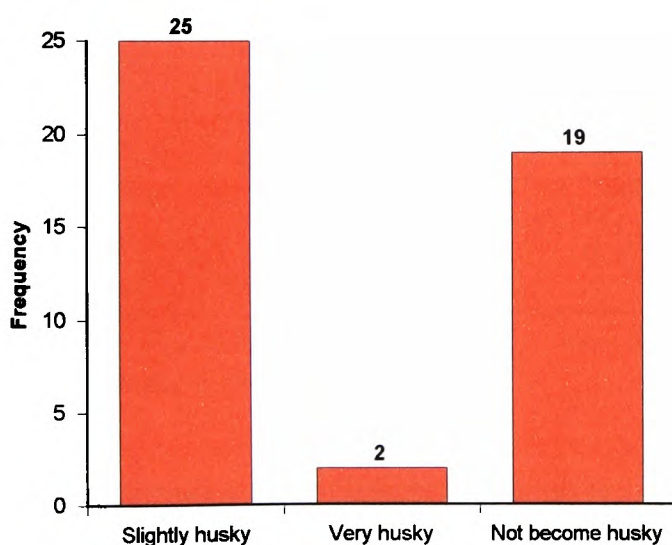
Since teaching the voice has become
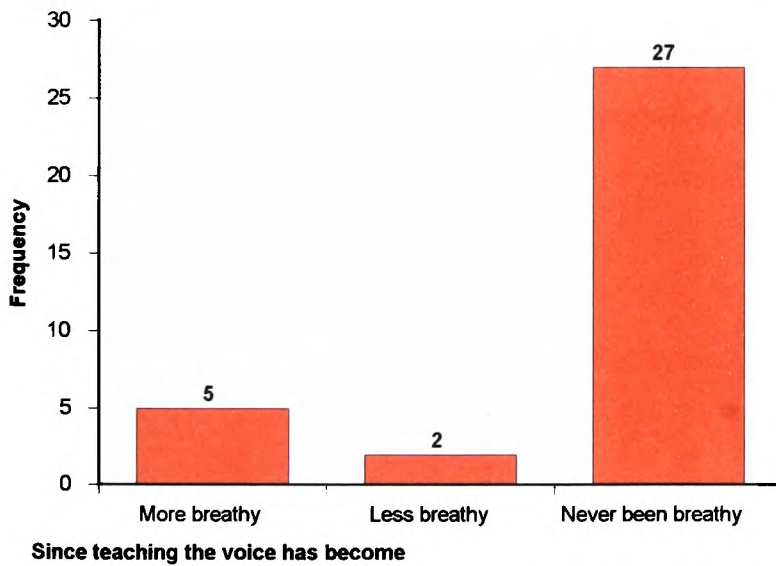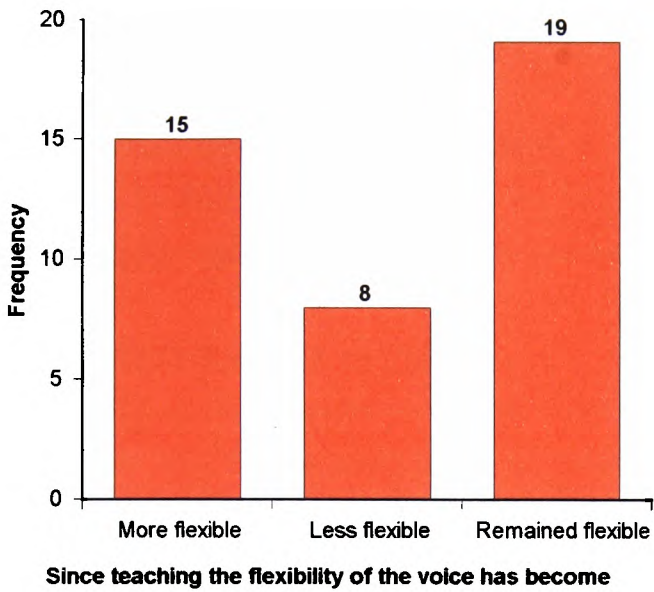
While recognising that the sample number was small, in reviewing these responses it is of concern to note the percentage of respondents who were experiencing vocal change within their first year in teaching, particularly if these results are viewed within the

framework of the number of teachers in work. An increase in vocal huskiness, harshness, strain, breathiness and a decrease in the pitch of the voice are all voice quality changes which indicate changes to the structure and function of the vocal folds.

Without information from a laryngeal examination, it would not be appropriate to suggest a cause for these voice quality changes but all are recognised as changes that occur as, or may be attributable to, vocal abuse and misuse.

9.8 VOCAL PERFORMANCE IN CLASS

Respondents were asked to comment on the performance of their voice in class. The results are shown below both as a total number of respondents and as a percentage of the total number of respondents.

- Twenty-six respondents occasionally had difficulty making themselves heard (41 per cent)
- Thirty respondents never had difficulty making themselves heard (47 per cent)
- Eleven respondents occasionally found their voice reliable (17 per cent)
- Thirty-one respondents always found their voice reliable (48 per cent)
- Twenty-three respondents were sometimes unable to project their voice (36 per cent)
- Twenty-four respondents were never unable to project their voice (38 per cent)
- Ten respondents found it difficult to change the pitch of their voice (16 per cent)
- Thirty-four respondents found it easy to change the pitch of their voice (53 per cent)
- Eleven respondents found it difficult to change the volume of their voice (17 per cent)
- Forty respondents found it easy to change the volume of their voice (52 per cent)
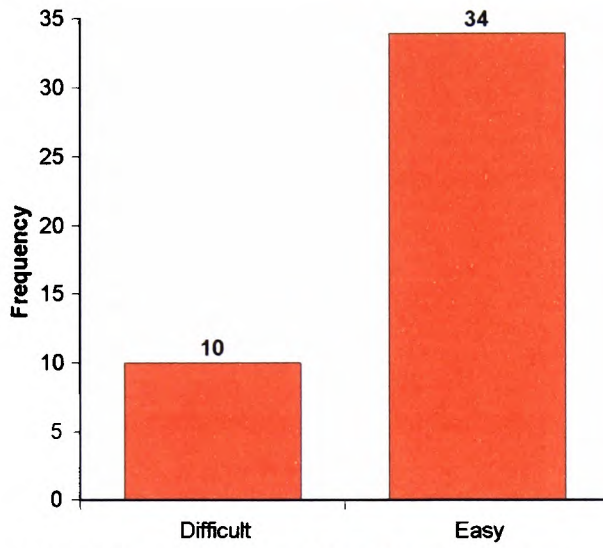
The ability to change the pitch of the voice in class
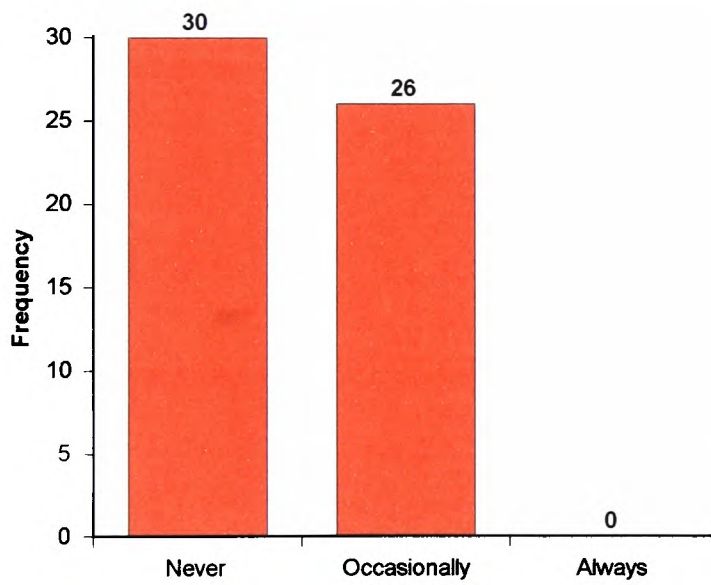
Since teaching, difficulty in making oneself heard
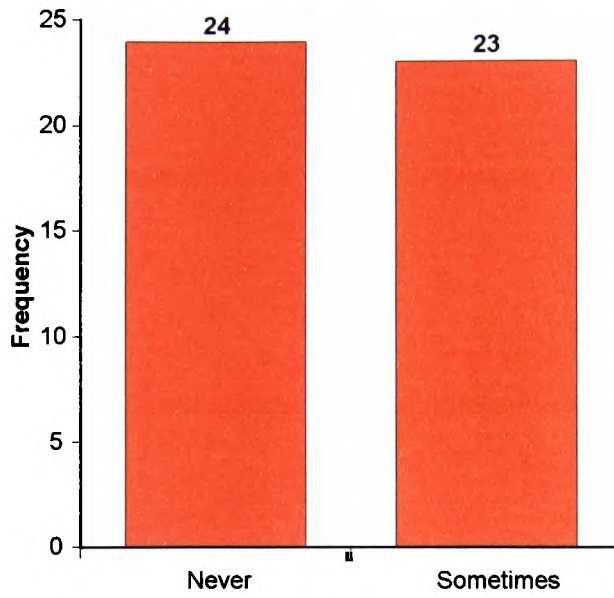
The ability to project the voice in class
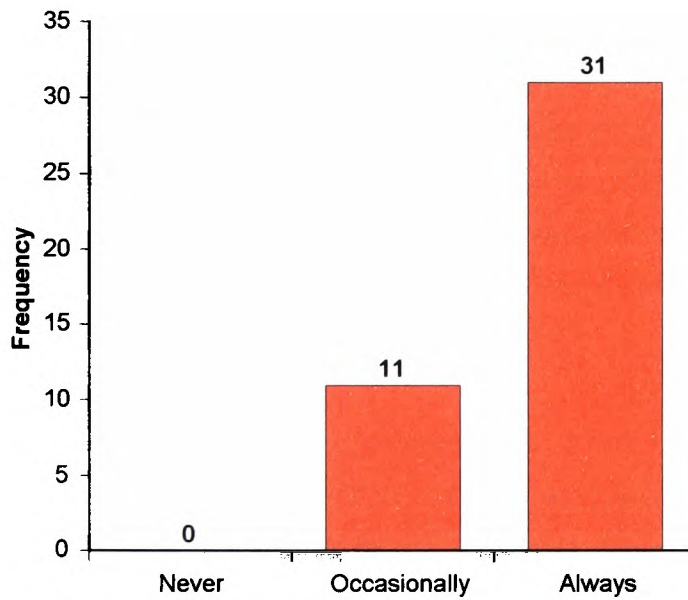
The reliability of the voice in class

The ability to change the volume of the voice in class
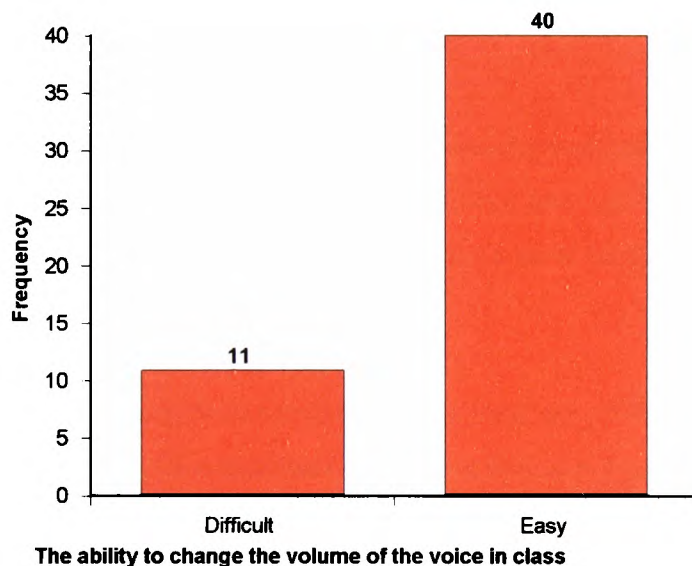
9.8.1 Review of Results

In reviewing these responses it is noteworthy that a high percentage of the respondents evidenced a lack of vocal robustness in class. Again the researcher is concerned to point out the small number within the response group but it is still of importance to recognise the limited vocal skills within the group. These are evidenced by the numbers of respondents who found it difficult to make themselves heard, to find their voice reliable at all times, to project their voice, to alter the pitch of their voice and to change the volume of their voice.

It may be that the already indicated presumed vocal damage had contributed to this lack of ability, but it is also significant to note that so many respondents were teaching with voices that were in some instances unable to meet one of the most basic demands of the classroom, namely to make themselves heard.

9.9 ADVICE REQUIRED BEFORE STARTING TO TEACH.

Respondents were asked to express an opinion on whether or not they would have appreciated advice on voice care, voice use in class and vocal maintenance before beginning to teach. Respondents were also asked to qualify the extent of this advice by

indicating whether they would have wanted no advice, some advice or a lot of advice. In view of the responses already noted above, the following results are perhaps not unexpected.

9.9.1. Advice on Voice Care:

- One respondent would not have wanted any advice (1 per cent)
- Forty-five respondents would have liked some advice (70 per cent)
- Thirteen respondents would have like a lot of advice (20 per cent)

9.9.2. Advice on Voice Use in Class:

- Two respondents would not have wanted any advice (3 per cent)
- Thirty-eight respondents would have liked some advice (59 per cent)
- Seventeen respondents would have liked a lot of advice (27 per cent)

9.9.3. Advice on Voice Maintenance:

- One respondent would not have wanted any advice (1 per cent)
- Forty respondents would have liked some advice (63 per cent)
- Fourteen respondents would have liked a lot of advice (29 per cent)
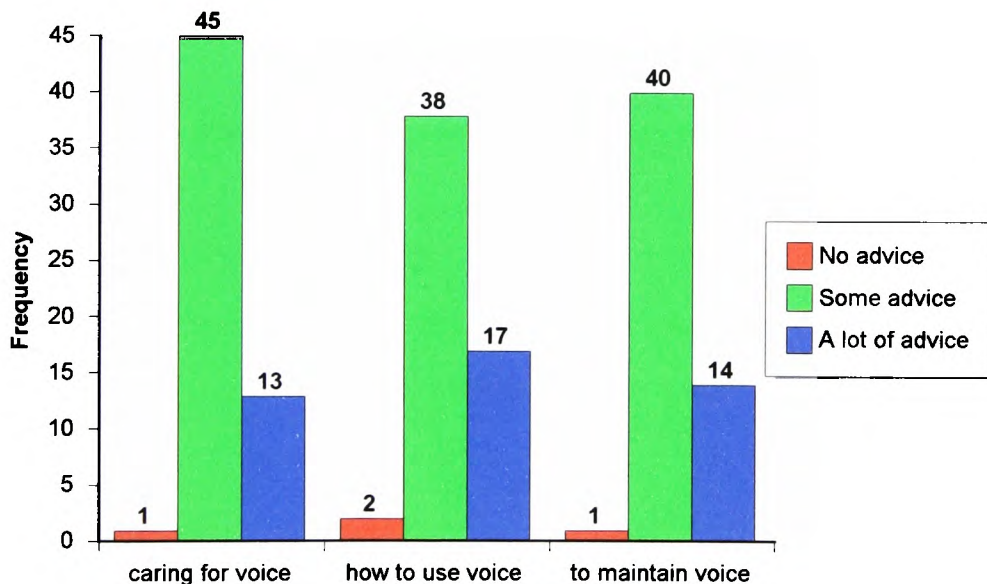
Before teaching advice that would have been appreciated

Review of Responses

In reviewing these responses they would appear to offer a more than eloquent argument for the incorporation of a training programme to offer student teachers information on voice care, voice use in the classroom and voice maintenance as part of professional undergraduate or graduate training. The researcher readily acknowledges that it may be necessary to revisit this information and training within the first year post-qualification, as it may be that this information would have more impact on individuals once the demands of teaching are a reality. As results from the main sample in this study show, changes in vocal quality still occurred even though training had been given (Chapter 8). However, what the researcher is unable to prove is whether the changes in vocal quality might have been more extensive if no training had taken place, although her prediction would be that this would have been the case.

9.10 DIFFERENCES AS A FACTOR OF AGE

In order to note any differences that might occur as a result of age the responses were looked at in more detail and the following results obtained:

Advice on Voice Care

Age	No advice	Some advice	A lot of advice
21-30 years	0	23	5
31-40 years	1	7	5
41-50 years	0	10	2
50 + years	0	1	1

Table 9.4

Advice on How to Use Voice in the Classroom

Age	No advice	Some advice	A lot of advice
21-30 years	1	18	8
31-40 years	1	6	6
41-50 years	0	9	2
50 + years	0	1	1

Table 9.5

Advice on How to Maintain Voice

Age	No advice	Some advice	A lot of advice
21-30 years	0	20	5
31-40 years	1	6	6
41-50 years	0	9	2
50 + years	0	1	1

Table 9.6

9.11 RESPONSES TO VOICE CARE AND VOICE MAINTENANCE

Responses from all age groups indicated little difference in their responses to the questions regarding voice care and voice maintenance.

Looking at the percentage of responses indicating that some advice would have been liked in comparison to those indicating that a lot of advice would have been liked, in all age groups, reveals the following that a higher percentage of those within the 31-40 age range and the 50 + age range than those in the 21-30 and 41-50 age ranges wanted a lot of advice against some advice.

9.12 FACTORS AFFECTING VOICE QUALITY

Respondents were asked to indicate what they noticed had affected their voice when starting to teach. The following responses were given:

- Forty-one respondents cited tiredness
- Twenty-six respondents cited illness
- Sixteen respondents cited anger
- Ten respondents cited emotional upset
- Ten respondents cited anxiety about their job
- Three respondents cited problems with family and friends

Respondents were additionally asked to specify anything else of note, which had affected their voice since starting to teach. The following responses were given:

- Seven respondents cited over or extended use of the voice
- One respondent cited use of high volume at home
- One respondent cited air conditioning in teaching rooms
- One respondent cited cigarette use
- One respondent cited stress
- One respondent cited colds, virus and OFSTED inspection

In reviewing these responses, it is apparent that all issues mirror those already highlighted as part of the constellation of factors that contribute to vocal abuse and misuse, namely issues of physical health, mental health and environmental factors.

9.13 VOICE MAINTENANCE STRATEGIES

Respondents were asked to respond to the statement, 'in order to maintain my voice I have found it helpful to:' Nine possible strategies were listed and respondents were asked to tick as many as they wished, that were relevant and that they would consider adopting.

- Forty one respondents said they would drink more water
- Twenty two respondents said they would talk quietly
- Twenty respondents said they would suck cough sweets
- Nineteen respondents said they would use it less
- Eight respondents said they would keep out of dry environments
- Six respondents said they would keep their throat warm
- One respondent said they would cut down on alcohol
- One respondent said they would cut down on cigarettes
- No respondent said they would watch their diet

9.13.1. Review of Responses

In reviewing these responses it is of interest to note that the most oft-quoted response, drink more water, is in fact the most helpful way in which to maintain voice. By raising the hydration level within the body, the vocal folds are indirectly lubricated and this can counter some of the effects of overuse on the vocal folds. Talking quietly and using the voice less are both useful measures to mitigate vocal damage. Sucking cough sweets, the third most popular remedy, is in fact of very limited use. Of the four most popular remedies chosen by the respondents, three would have been of use in increasing vocal hygiene.

9.14 DIFFERENCES BETWEEN GROUPS IN HOURS SPENT TEACHING

The researcher was interested to note what differences if any might exist between those who taught in Primary Education and those who taught in Further Education. Of those respondents who indicated specifically the stage/sector at which they taught, their teaching loads were as follows:

Hours Spent in Teaching

Hours	0-10	11-15	16-20	21-25	26-30	31-35
Primary Education	1	0	0	3	9	14
Further Education	2	2	4	10	2	0

Table 9.7

9.14.1. Review of results

In reviewing these results, it is of considerable concern to note the very high number of hours spent teaching each week by a group of newly qualified teachers. Considering that the majority of the group were teaching for in excess of 20 hours per week it is not surprising that they should experience the vocal changes already recorded in this chapter. A recent study (Owen 2002) for the Government by Pricewaterhouse-Coopers found that teachers worked an average of 52 hours a week, compared with 45 hours for managers and other professionals.

9.15 SUMMARY

This chapter has looked at the results from the Voice Awareness Questionnaire completed by students from the academic cohort who qualified in 1999. The information gained from this survey has added to the researcher's knowledge of this professional group. This information relates not only to the different vocal demands placed on this professional group with respect to different educational sectors, but also to the different vocal needs and training expectations of different age groups. This new information has provided a rich source of data, additional to that already gained from those individuals who were part of the ongoing research project.

Allied to the knowledge of the physical health, mental health, vocal health and environmental factors to which they alluded, this information has offered a significant additional dimension to the profile emerging from this study of the experience of newly qualified teachers/lecturers in both the Primary Education and the Further Education sectors. This has allowed the researcher to confirm that the vocal and professional experiences of those within the main sample were not in any way unusual.

The following chapter will draw together the many issues raised by this project, which affect the vocal health of the newly qualified teacher/lecturer. It will examine some of the factors which, it is suggested, contribute to what is, regrettably for many, a less than satisfactory vocal outcome, with potentially far-reaching effects on their future professional lives.

CHAPTER 10

Study Findings and Limitations

This chapter presents the most notable findings from the study. Already fully discussed in the text, they are here presented to identify a number of important elements in this topic area. The chapter also endeavours to identify the limitations of the study and to suggest changes and modifications that could have improved it.

CHAPTER 10

10.1 INTRODUCTION

It should be acknowledged at the outset of this chapter that the research hypothesis that voice care and development training during teacher training would mitigate vocal abuse and misuse within the first year of training remains unproven. The input that the sample received could not be shown to reduce vocal attrition in all those who had received such training. However, there have been some notable findings from the study, which have been fully discussed in the main body of the text and which are presented in this chapter.

The chapter identifies a number of elements that the researcher believes are of importance in this topic area. Any conclusions must be tentative owing to the small number of subjects in the study and the fact that the methods of assessment have not all been subjected to test validity and reliability.

The following conclusions have been designated specific sections for the sake of clarity, namely voice, mental health, physical and vocal health and professional transition factors.

All findings here included are deemed to be of note. For the sake of clarity, however, similarities between the two groups within the main categories are presented initially, while differences between the sample groups are noted subsequently in a separate section.

10.2 VOICE

Prognostic indicators have historically been considered along with other measures in determining therapy outcome measures. Results obtained from the assessment of pre-disposing factors, such as lack of adequate breath support, would be carefully considered. However, the voice quality changes experienced by the group did not reflect the hitherto presumed influence of pre-disposing factors. Some individuals appeared to experience little vocal attrition despite presenting with a number of pre-disposing factors.

From an initial sample of 50 prospective teachers, only 54 per cent presented with a vocal quality which, on perceptual voice quality rating, was considered to be within normal limits. Thirty per cent presented with a vocal quality which was considered to be of slight concern. Sixteen per cent presented with a vocal quality which was of definite concern. None had a vocal quality of a professional voice user standard.

No identifiable factor was noted which could account for one individual experiencing positive vocal change while another experienced negative vocal change, or another experienced no vocal change.

All in the study sample were found to have experienced vocal change during the first term of teaching.

Only 38 per cent of respondents were found to feel that their voice was equal to the task of teaching.

The workplace was found to provide an adverse vocal environment for <u>all</u> in the study sample.

A significant difference was found to exist in the vocal awareness of teachers before and after starting to teach.

Features of voice use within the classroom environment were noteworthy, in that a high percentage of teachers evidenced a lack of vocal robustness in class.

The majority of the teachers reported that they would usually talk for over 60 per cent of each session.

A lot of advice during training on voice care (20 per cent), how to use their voice in the classroom (27 per cent) and on voice maintenance (29 per cent) would have been welcomed by those in the postal questionnaire sample.

Some advice during training on voice care (70 per cent), how to use their voice in the classroom (59 per cent) and on voice maintenance (63 per cent) would have been welcomed by most of those in the sample.

All subjects within the selected sub-group of those who experienced negative change in voice quality throughout the year were found to have significant problems with regard to respiration, conditions of the vocal tract, vocal vulnerability and voice production related factors.

Similar factors were noted for those within the selected sub-group who experienced positive change in voice quality throughout the year. Fifty per cent of the group were found to have experienced problems related to respiration, 75 per cent presented with conditions of the vocal tract, and voice production related factors. All had reported factors of vocal vulnerability.

Fifty per cent of the subjects within the selected sub-group of those whose voice quality was the same at all points when tested were found to have experienced problems related to respiration. All had problems related to conditions of the vocal tract, all were vocally vulnerable, all presented with factors related to voice production, all presented with problems related to stress and anxiety.

All subjects within each selected sub-group of negative vocal change, positive vocal change and no vocal change throughout the year were found to exhibit predisposing factors, which could contribute to vocal abuse and misuse.

Factors within the teaching environment must be considered as potential contributors to vocal change. These would include the vocal loading experienced by each individual.

As a result of the vocal demands of the second term, more vocal damage was found to have taken place, which added to the vocal damage sustained in the first term.

All in the study sample were found to regard their voice as an important professional tool, but 92 per cent of respondents reported that voice care was not seen as important by fellow staff members.

Seventy per cent of the study sample reported that they had noticed vocal change during the year.

Half of the respondents in the postal questionnaire had occasionally lost their voice since starting to teach.

10.2.1 DIFFERENCES IN SAMPLE GROUPS

There were differences between the two groups in the sample. These differences need to be viewed within the context of the different education sectors in which the sample groups, which as has already been identified as opportunistic, were working. Each teaching environment will present the individual with different vocal demands. In considering the differences in sample groups it is important to consider the contextual aspects of these differences and to view these differences in the light of the vocal challenges experienced by both sample groups, as discussed in 4.9.

Very slight differences in vocal quality were found to exist in this initial sample between those who would work within the Further Education sector and those who would work within the Primary Education sector.

Thirty-three per cent of individuals within Further Education and 50 per cent of individuals within Primary Education presented with a vocal quality that was of slight or definite concern.

More change in vocal quality was experienced by Primary Education teachers than Further Education teachers.

More than twice the number of Primary Education teachers as Further Education teachers experienced negative vocal change.

Twenty per cent more Primary Education teachers than Further Education teachers experienced positive vocal change.

Seventy-six per cent more Further Education teachers than Primary Education teachers experienced no change in vocal quality. The results of this study suggest that the demands of the teaching role in Primary Education far exceed what can be catered for in the limited one-day training provision offered to the group.

Differences were found to exist in the classroom speaking volume of both groups. The majority of those teaching in Primary Education consistently used high volume with none using low volume, while those in Further Education used a more balanced distribution of high and low volume in the classroom.

10.3 MENTAL HEALTH

All in the study were found to report increased levels of stress and anxiety in the second term.

All subjects within the selected sub-group of those who experienced negative change in voice quality throughout the year showed changes in levels of stress and anxiety.

Within the selected sub-group, 75 per cent of those who experienced positive change in voice quality throughout the year showed changes in levels of stress and anxiety.

Only 25 per cent of the group believed they were able to cope with their job without worrying.

There was no common pattern in the way respondents dealt with stress.

10.3.1 DIFFERENCES IN SAMPLE GROUPS

Seventy-one per cent of Primary Education teachers in contrast to 60 per cent of Further Education teachers showed change in both anxiety and depression scores throughout the year.

Forty-one percent more Primary Education teachers than Further Education teachers experienced negative change on anxiety scores and 23 per cent more Primary Education teachers than Further Education teachers experienced negative change on depression scores throughout the year.

The proportion of Further Education teachers experiencing positive change on anxiety scores was 28 per cent higher than for Primary Education teachers. The proportion of Further Education teachers experiencing positive change on depression scores was 20 per cent higher than for Primary teachers.

More Further Education teachers than Primary Education teachers experienced no change in Anxiety and Depression scores experienced throughout the year.

Major stress factors within work were perceived differently by both groups. Those in Further Education had more specific concerns related to institutional and personal issues while those in Primary Education noted a more general degree of stress and anxiety.

Ten per cent more Further Education lecturers than Primary Education teachers showed negative change while nine per cent more Primary Education teachers than Further Education teachers showed positive change in Social Adaptation Self-Evaluation scores throughout the year.

10.4. PHYSICAL AND VOCAL HEALTH

Little difference in the reported general health of those in the study was noted.

Physical tiredness was reported by the majority of the study group

Little difference was found to exist in the reported previous vocal health profile of both groups.

Seventy-seven per cent of respondents reported that they had been hoarse in the past; of these 47.7 per cent were Further Education lecturers and 29.3 per cent were Primary Education teachers.

Both groups reported current vocal hygiene/vocal health issues, including a dry throat after using their voice a lot, a feeling of tightness in their throat and shouting.

One-third of the students reported that they worked in dusty conditions.

10.4.1 DIFFERENCES IN SAMPLE GROUPS

Differences were found to exist in the number reporting a weak or hoarse voice after a night out: twice as many Further Education as Primary Education teachers reported this.

More Further Education than Primary Education students drank and smoked.

10.5. PROFESSIONAL TRANSITION FACTORS

Respondents were very self-critical, ready to 'own' failure and had very high expectations of themselves and their professional role.

By the end of the first year only 50 per cent of the group agreed that the job had measured up to their expectations.

Issues of responsibility were the most often quoted difficulty of the transitional process from student to teacher, as cited by 86 per cent of the group.

As an indicator of change and development in the professional role, increased self-confidence was identified by over 50 per cent of the group.

The majority of the newly qualified teachers in the study were found to be teaching in excess of 20 hours per week with over 50 per cent of those in Primary Education teaching for between 31 and 35 hours per week.

Increased levels of organisation and planning by the sample group were self-reported in the second term.

Respondents saw professional success as related to staff/student relationships or student progress.

Financial rewards were seen as less important than aspects of professionalism, accountability and respect or recognition for the job.

In their response to the job both groups noted the paradox in that the complete engagement they experienced with their role was both a plus and a minus.

With regard to how much both groups perceive the political climate to have compromised the teaching role both groups felt disenfranchised; those in Further Education by the emphasis on fiscal control and funding, those in Primary Education by the usurping of the teacher role in favour of a very prescriptive approach to education.

Whole class teaching for the majority of their contact time was found to be usual in both Primary and Further Education.

Teaching practice, or issues related to teaching, were evidenced by the majority as being the most useful aspects of their training. Least useful were aspects perceived as having a more peripheral relationship to teaching or the more academic/theory elements.

10.5.1 DIFFERENCES IN SAMPLE GROUPS

Significant differences were found to exist at the end of the first year between those in Further Education and those in Primary Education regarding the identification of the most significant professional issues. For Further Education teachers' issues of employment and re-employment were most significant, for Primary Education teachers' staff relationships were most significant.

Differences were found to exist between the working practice of those in Primary Education where full-time permanent work was more usual, while temporary or part-time work was more usual for those in Further Education.

A significant difference was found to exist in the degree to which those in Further Education and those in Primary Education felt secure in their professional identity at the end of the first year; much greater confidence was evinced by the former group, despite lower job security.

In their satisfaction with the job they had accepted, fifty per cent of those in Primary Education evidenced concern about the job choice they had made, and wished they had not, in contrast to only 18 per cent of those in Further Education.

With regard to their future in teaching, those in Further Education, in contrast to those in Primary Education, took a much more positive view that they would remain in teaching over the next two years, despite the finding recorded in 2 above.

10.6 CONCLUSIONS

The conclusions from this study offer a number of new perspectives on this topic area. They show strong evidence of the influence on newly qualified teachers of the constellation of factors which are known to affect vocal health. These are physical health, mental health and environmental factors.

Before starting to teach only half of the group had a vocal quality that was considered to be within 'normal' limits. While this use of 'normal' is subjective, it is used to indicate a voice that has no demonstrable features which would cause concern. It does not indicate a voice that is able, without training, to meet the demands of the classroom as reported in this study.

Allied to the vocal change already noted, it must also be recognised that the group had intense vocal demands to which they would be unlikely to be able to respond, considering the vocal profile of the group before starting to teach.

The vocal profile of the subject group, after a comparatively short period in post, shows significant vocal change, much of it negative.

The intensity of the vocal loading, the number of hours talked at high volume in poor environmental conditions, is of great concern. While this raises important issues regarding long-term vocal health it also prompts questions related to the efficiency and effectiveness of a teacher who is unable to make him or herself heard within the classroom, as reported here.

Of importance are the conclusions reached regarding issues of transition from student to professional. These indicate that for the newly qualified teacher much greater attention should be given to issues of mental health, social adaptation, support, mentoring, and preparation which might reduce the early loss to the profession of a group of highly committed professionals.

It is to be hoped that some of the conclusions from this study could form the basis of increased attention to the vocal health of this professional group both before and during their classroom career.

10.7 LIMITATIONS OF THE STUDY

This chapter has highlighted some of the findings generated by the study and it is hoped that some of these findings will be used to initiate change in the future. Despite the opportunity afforded by this research to present new data and the significant achievements of the research, there are a number of limitations in the study of which the researcher is aware and which need to be made explicit.

10.7.1. Research Design

When considering the research design it should be acknowledged that a major limitation was the sample size. There are two contributory reasons for this, namely lack of money and limited time.

10.7.2. Sample Size

Lack of money meant that the sample size was limited to a specific group which the researcher could access. Due to the small number of subjects in the sample the effect on the research was that:

- *It would be difficult to generalise from such a small study*

It is therefore not possible to suggest that the findings are fully representative of the subject group and this feature could limit the application of this research.

- *The number of controls in the sample was too small to qualify as subject controls*

The vocal experience of those in the control group can not therefore be said to be representative of the experience of newly qualified teachers without voice training.

- *The number within the sample was too small to provide much quantitative data*

The provision of quantitative data to offer triangulation of results, apart from the assessment of vocal quality, has not been possible.

- *Opportunity sampling was used to access the subject group.*

It is therefore not possible to suggest that the subjects within the research sample represented either a random selection nor a structured one.

While very aware of these negative aspects, the researcher is of the opinion that they were compensated for by the richness of the data gained. This was achieved as a result of the close links forged with the group and the individual relationships that were developed. In consideration of the time and financial strictures under which the work was conducted this would not have been possible with a larger group.

10.7.3. Research Tools

The study incorporated some design aspects which as a consequence affected the research.

- *The use of semi-structured interviews as a way of accessing information*

It is not possible to say that interviewer bias did not influence the study in a particular way. Every effort was made to maintain a position of interested participant in the discussions although there were occasions where through interest or excitement the role may not have been maintained. This did not, however, compromise the direction of the discussion or influence the responses received. The relationship that had been formed with each individual in the group meant that all participants felt comfortable, which promoted a climate of trust. As a result there is confidence that individuals were able to be honest in their responses and that the answers given reflect their genuine feelings and not what they thought they should say.

- *The use of point-in-time questionnaires*

It has not been possible to guarantee that responses to the questionnaires are consistent over time: the questionnaires were reflecting aspects of emotional and mental health, and these personality aspects are known to change depending on personal circumstances and as a reflection of life events. As such there is confidence that the responses accurately reflected how each individual felt at that moment in time and that this measure could be used to contrast their feelings when the questionnaires were reintroduced a year later. Changes in scores were therefore a true reflection of a change in status in their emotional and mental health and were a useful and appropriate device to use.

- *The use of point-in-time assessment of vocal quality*

It is not possible to guarantee that the vocal quality assessed was fully reflective of the habitual vocal quality of the speaker. Although it is possible to suggest that the vocal quality of each individual at the time of each recording may not fully reflect the habitual vocal quality of the speaker, it is unlikely that the vocal quality recorded was significantly different from normal. Change in vocal quality usually occurs over a period of time and is generally incremental in nature, particularly in the case of change as a result of vocal abuse and misuse. Dramatic change in quality from one day to the next is usually not exhibited unless a major episode of vocal abuse has occurred, in which case, only limited voicing would have been possible, or where voice loss occurs as a result of a psychogenic disorder. In instances of vocal change as an effect of an upper respiratory

infection, accompanying changes in nasal resonance would have been identified by the expert listener and myself, and noted accordingly.

10.8 MODIFICATIONS

In the light of these limitations the following modifications to the research are suggested.

10.8.1 Subjects

The number of subjects in the sample was small and it would be difficult to generalise from such a small study. However, the preliminary results from this study are seen as providing sufficiently robust material for it to be used as a pilot project and as appropriate to a PhD frame. Should funding and time be available, a much larger project could be attempted with confidence. This larger study would therefore allow a sample to be more fully representative of the population and could reflect gender, race and age differences more comprehensively.

10.8.2. Controls

The number of controls in the sample was too small to qualify as subject controls. Once this lack of controls became apparent, due to student drop-out rates from an initially small group, consideration should have been given to postponing the research until the following academic year to allow time for a more secure system of maintaining the control group to be devised. However, those who had initially agreed to act as controls had done so with the firm intention of complying with the research process, and so it was possible that a similar situation would occur in the following year. At that time there would have been no guarantee that another subject group would be equally committed, and so both subjects and controls could be in jeopardy.

In attempting to partially retrieve this situation the researcher undertook a later action of surveying a number of teachers from the succeeding academic year who had not had any training.

10.8.3. Self-Selection

The issue of self-selection is of concern. The selection of the sample group from those individuals who attended the training workshops and lectures did not fulfil the criteria of random selection, but was rather a feature of opportunity sampling. One of the solutions would be to have access to a greater number of individuals from whom to select, which would of course have to be supported through increased funding.

The manner of selection of teachers from the 1999 cohort to act as a control group was that of opportunity sampling rather than of random selection. While every effort was made to randomly select individuals from this cohort, the choice was already limited due to the fact that a number of the cohort were automatically unavailable for selection. This was due to two reasons, either because they were currently not working as teachers, or by their request that the university should not contact them after graduation.

10.8.4. Point-in-Time Questionnaires

Through the use of point-in-time questionnaires, information was obtained which reflected the levels of anxiety and depression experienced by the subjects at specific points in their professional life. The time at which they completed the questionnaires could have significantly altered their responses. In completing the questionnaire at the end of their academic training, subjects could have been suffering not only from the rigours of the examination process but also from anxiety, which accompanies major life changes. As such their responses may not have been truly representative of them as individuals, and their scores at the end of their first year in teaching may more accurately reflect their true levels of anxiety and depression. It should, however, be remembered that their end-of-year scores could also be a reflection of increased optimism at completion of the teaching year.

In the same way, the first responses obtained from the Social Adaptation Self-Evaluation questionnaires may be more reflective of the respondents' lives as students, which may have offered a greater degree of social freedom. The scores obtained at the end of the first year in post may be more representative of their habitual social mores or at least those of the life stage they had now entered.

10.8.5. Vocal Change

In the assessment of individual vocal change during the year, vocal quality was captured acoustically at a point in time which may not have fully reflected habitual vocal quality. Each individual should have been asked whether their vocal quality on the day of recording was any different from normal. Should this research be replicated in future that would be a recommendation.

All these aspects have been considered and addressed within the main body of the text and it is hoped that they are sufficiently transparent to allow that every attempt has been made to recognise the limitations of the study and to recommend modifications for the future.

10.9. POSITIVE ASPECTS OF THE RESEARCH PROCESS

There were a number of aspects of the research which worked well, notably the richness of the information offered by those within the study. This information allowed considerable insight into the many facets of their professional roles and the impact this had on both their personal lives and vocal health. Those within the study felt that there was genuine interest in them as individuals and good 'listening skills' (acquired as a necessary component of the researcher's professional role as a clinician) facilitated this disclosure of information.

Flexibility with regard to meeting individual demands, such as place and time of interview, was critical in terms of gaining and retaining access to the study group. The ability to retain access to all of the group throughout the study was testament to their interest in the project and in being part of the project.

The overall management of the project went well. Timetabling issues, such as recording and interview arrangements for quite large numbers of people, went well. Again this is a tribute to the efforts made by a number of people to help with this and if possible accommodate the needs of the researcher.

The response to the postal questionnaire was very positive. The numbers who responded far exceeded expectations and offered a strong indication of the level of concern and interest that they had in the topic.

What is most pleasing is that the information from this study may make a difference to the management of teachers' voices in the future, as much that is new has emerged.

CHAPTER 11

Recommendations

This chapter draws together some of the issues that have been raised by the study which could contribute to further research. As a result of the study findings a number of recommendations are made which might inform future working practice and it is hoped increase vocal health within the teaching profession.

CHAPTER 11

11.1 INTRODUCTION

This chapter will look to identify factors arising from the study which could contribute to further research areas. In addition there is a need, as indicated by the research findings, to increase teacher awareness of vocal dysfunction and the factors that contribute to vocal abuse and misuse.

The researcher will also make certain recommendations to be considered, in order to promote increased understanding and attention to this critical area of professional development. Some of these go beyond the original focus of the research but arise from data gathered doing it.

11.2 AWARENESS OF VOICE CARE AND VOICE USE

As has been apparent from this study, there is limited awareness of voice care and voice use for teachers in training and for newly qualified teachers. The study did not support the researcher's hypothesis that voice care and development training during teacher training would mitigate vocal abuse and misuse; what has been shown is that the input that the sample received did not mitigate vocal abuse and misuse in year one. More training and longer term effect remain untested. The researcher, however, in recognition of the findings of the study, remains of the opinion that voice care for teachers in training should be a high priority. As this study has proved, despite input, teachers still experience problems.

11.3 VOCAL LOADING

Heinrich *et al* (1996) estimated that the average pupil spends 50 to 80 per cent of the school day listening to teachers. The current study has shown that the majority of the teachers in the sample spent more than 60 per cent of each session talking and, in the case of Primary Education sector, this was at high volume. The study additionally noted that the majority of the newly qualified teachers were found to be teaching in excess of 20 hours per week. Those within Primary Education were reported to experience an even heavier teaching commitment of between 31 and 35 hours per week.

If the effect on an untrained voice of such heavy vocal loading is considered, it is not surprising that all of those within this study had experienced vocal change during the first term.

For much of this time teachers worked within an environment which all within the sample acknowledged as adverse, due to a number of factors. Examples cited were lack of ventilation, lack of hydration, poor acoustics, raised background noise levels, particularly notable in the Primary Education sector, where small children habitually use a higher vocal pitch with the possibility of the Lombard effect as a result - this is where there is a tendency to increase vocal intensity in response to increased background noise.

11.4 TEACHER STRESS AND ANXIETY

Teaching is regarded as a highly stressful profession (Malone *et al* 1997) and as has been acknowledged in this study, the effect of stress on the voice is significant. All subjects within the selected sub-group of those who experienced negative change in voice quality throughout the year were found to present initially with problems related to anxiety and stress. It must, however, be acknowledged that problems related to anxiety and stress were also found within the sub-group who experienced positive change in vocal quality, but not universally across the group.

However, if other findings from the research related to stress factors are added to this, then a picture emerges of a professional group who experience significant stress as a function of their professional role. For example, only 25 per cent of the group were able to cope with their job without worrying, a number reported that they worried unnecessarily, and all in the study reported increased levels of stress and anxiety in the second term. All these findings are an eloquent testament to individuals under stress.

This finding compares with the 1990 UK Labour Force Survey where 46 per cent of all teachers claiming to have a work-related illness reported that it was due to stress. Travers and Cooper (1996) explain and explore the causes and consequences of teacher stress; Milstein and Golaszewski (1985) suggest that the end result of teacher stress, 'is that many talented men and women with high expectations of achievement are dispirited

and disillusioned' This resonates with the findings in this study that only 50 per cent of the study sample agreed that the job had measured up to their expectations.

11.5 PROFESSIONAL PROFILE AND WORK ENVIRONMENT

Looking at the elements above, a picture emerges of the teacher/lecturer as an individual working in an extremely demanding and stressful job. There is little indication that the working environment addresses aspects of vocal health and hygiene in a proactive way. The teacher or lecturer who may, if the findings of this study are correct, have limited vocal skills on qualification, is then expected to meet the very heavy vocal demands of the classroom coupled with, for the newly qualified, the demands imposed by the transition from student to professional.

11.6 RECOMMENDATIONS

As a result of the findings from this study, the researcher recommends:

- A much larger follow-up study should be undertaken to allow access to a larger sample population.

- Recognition should be given to the very high reported incidences of voice loss in the sample. If a similar number of all newly qualified teachers experienced a physical disorder of this magnitude, this would be perceived as an epidemic.

- An information campaign, which targets training institutions, should be initiated to allow information to be disseminated about the importance of voice care and development.

- Students should be screened for potential vocal vulnerability so that prophylactic measures could be put in place during training.

- A specific module should be offered during teacher training to include advice on voice care, advice on how to use voice in the classroom and advice on how to conserve/maintain voice.

- Newly qualified teachers should be offered much more support during their first year in post in order to cope with the demands of the role.

- Newly qualified teachers/lecturers should have a timetable that recognises their status.

- Education authorities and headteachers should take much more responsibility for ensuring that issues of occupational health are given a higher profile within schools. College governors/senior managers should do the same within Further Education.

- Environmental aspects within the school/college should be addressed in order to promote good vocal health. This would include, for example, the level of hydration within the classroom, classroom temperature control, ventilation, dust levels and the use of dust-free chalk.

- Aspects of classroom design should be reviewed in order to ensure a well-balanced acoustic environment.

- As a trigger to measures to prevent cumulative damage during succeeding terms, a vocal health check could be instigated at the end of the first term for newly qualified teachers/lecturers.

- Given the issues related to recruitment and retention that the study reported, there could be a greater focus on the realities of teaching from training institutions to prepare students for the professional role, although it is recognised that there are pressures against this related to course completion and funding for the university/college.

- Support in the form of increased mentoring during the first year should be put in place in order that teachers do not feel de-skilled and lacking in confidence, as particularly reported by those in Primary Education.

- Support in the form of a launch, by the Department for Education and Skills, of an awareness campaign to give much greater recognition to the costs associated with voice disorders in teachers. These costs are not only personal, but are training and employment costs. The way in which a voice disorder may severely limit individual careers in teaching should also be highlighted.

- Nation-wide training for teacher returners should also be provided so that those teachers who have not had to use their voice in a classroom setting for some time could be offered voice conservation and training techniques.

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APPENDIX 1

Dear

I am a doctoral student, supervised by Professor McNay, Head of the School of PCET. I am researching the high levels of vocal attrition within the teaching profession where many individuals / practitioners have episodes of vocal strain and damage and indeed periods of complete voice loss which adversely affect their professional careers. My study is of how teacher's voice quality varies in their first year of work, and the effect that voice training can have on preventing loss of quality. I have the endorsement of Diana Jones and of the students on the course committee, who were enthusiastic about the work.

The purpose of this letter is to ask for your help in encouraging 2 or 3 of your cohort to participate in my study. What I would like, ideally, is for you to inform students in your group of this work and ask if there are any who are interested in being volunteer participants in a 'control group'. This would be in addition to those who sign up for the workshops I am organising this semester.

Their participation would involve them in:-

1. Filling in a short questionnaire
2. Recording a short speech sample
(Items 1 and 2 should take no longer than 20 minutes)
3. Keeping a 'voice' diary on a once a month basis during their first year in a teaching post
4. Re- recording the speech sample at their place of work at the end of the Christmas '98 and summer '99 terms. I will travel with recording equipment to where they are

In return for their help, at the end of the summer '99 term, individual sessions of voice care and development would be offered to help participants conserve and maintain effective voice use in their professional life.

Your involvement would be very much appreciated, accordingly I enclose a form for students to complete and which I would be grateful if you could return to me. I have an in - tray in the school offices at PCET.

With many thanks,

Yours sincerely,

Stephanie Martin

APPENDIX 2

VOICE AND THE TEACHER

Code: Tutor: Stephanie Martin

INTENTIONS:
To enable participants to respond to the varying vocal demands of the college environment in the most positive and productive ways. To help them use their voices effectively and efficiently to minimise vocal abuse and misuse.

INTENDED FOR:
Those who feel that they would benefit from learning more about how the voice functions and how they can maximise their own vocal effectiveness in response to different needs and circumstances. (Participants will be invited to be part of an ongoing research project into voice care and development for teachers)

DESCRIPTION:
The course will explore the nature and origin of vocal abuse and misuse and the benefits of different coping strategies. It will actively encourage participants to reflect on the vocal demands of the school environment and will present explanations of the causes of voice problems in schools. Advice, strategies and skills for effective voice use, in addition to practical workshop sessions will be offered. The course will be highly interactive and participants are encouraged to wear loose comfortable clothing.

ASSESSMENT :
During the course keep a 'voice' diary, noting changes in vocal quality, documenting periods when, for example, your voice is strained or harsh. Note any reasons for this and support these with reference to material learned throughout the course.

At the end of the course evaluate any changes that may have occurred in the way you now think about your own voice and illustrate any preventative measures you may have taken in order to mitigate against future vocal abuse and misuse.

APPENDIX 3

VOICE CARE AND DEVELOPMENT FOR TEACHERS WORKSHOP

The practical aim of this one day workshop, is to enable participants to respond to the varying vocal demands of the school environment in the most positive and productive ways. To help them use their voices effectively and efficiently to minimise vocal abuse and misuse.

The course will explore the nature and origin of vocal abuse and the benefits of different coping strategies. It will actively encourage participants to reflect on the vocal demands of the school environment and will present explanations of the causes of voice problems in schools. Advice, strategies and skills for effective voice use, in addition to practical work will be offered.

This course is intended for all those who feel they would benefit from learning more about how the voice functions and how to maximise their own vocal effectiveness in response to different needs and circumstances Participants will be invited to be part of an ongoing research project into voice care and development for teachers.

As the workshops are highly interactive, participants are encouraged to wear loose comfortable clothing. Places are limited to a maximum of fifteen students per workshop.

In order to accommodate as many people as possible, the initial workshop on June 10th will be repeated on June 11th and 12th . Please indicate on the attached sheet, which workshop you would like to attend.

APPENDIX 4

Voice and the Teacher
Lesson Plan - 1

The first lesson began with an introductory discussion regarding the incidence of vocal abuse and misuse within the teaching profession. It was important to establish a group relationship as many of the exercises require physical contact one with another. It was also vital that there was a feeling of trust built up between the course leader and the group. This was initially established by making sure that all the participants were introduced to each other and that the researcher knew each individual by name.

An explanation of the research project was given and the participants were invited to 'sign on' for the duration of the study. All agreed to be part of the study and were indeed prepared to actively participate.

It was also important to establish why participants had decided to take this particular extension study and all were asked to write down their expectations for the course and why they had joined. While not all responded, 16 individuals submitted a response. See appendix The course assignment - The Voice Diary was discussed with the group and the criteria for completion of this was highlighted

The first part of the two hour session was devoted to a general description of voice which highlighted the link between voice and emotion, voice and personality and the uniqueness of voice. Group participation was good and individuals brought ideas and comments to the general forum. The link between voice and teaching effectiveness was explored.

Overheads were shown which offered an insight into the anatomy and physiology of the larynx and the respiratory system which was deemed important to allow individuals to understand the mechanics of voice production. A description of the vocal folds was given in terms of their physical properties and their mechanical movement so that the link between breathing, voice and resonance could be made It was felt inappropriate to go into too much detail but to offer an understanding which would be a more useful tool.

An outline description of respiration and posture was given illustrating the effect on voice

Part 2
The practical part of the workshop focused on breathing and relaxation. The group were asked to watch each others breathing patterns to establish areas of tension such as raised should posture and to think about their own posture at all times. A period of supine relaxation was introduced which offered a mixture of imagery and progressive relaxation techniques. Most of the group achieved a degree of relaxation which was effective and the researcher went round each participant individually assessing the degree of residual tension and encouraging participants to self monitor.

The session finished with participants gently vocalising on a sigh and a hum

Handouts. *Respiration. Vocal fold marathon. Voice care. Reading list. The Voice Diary*
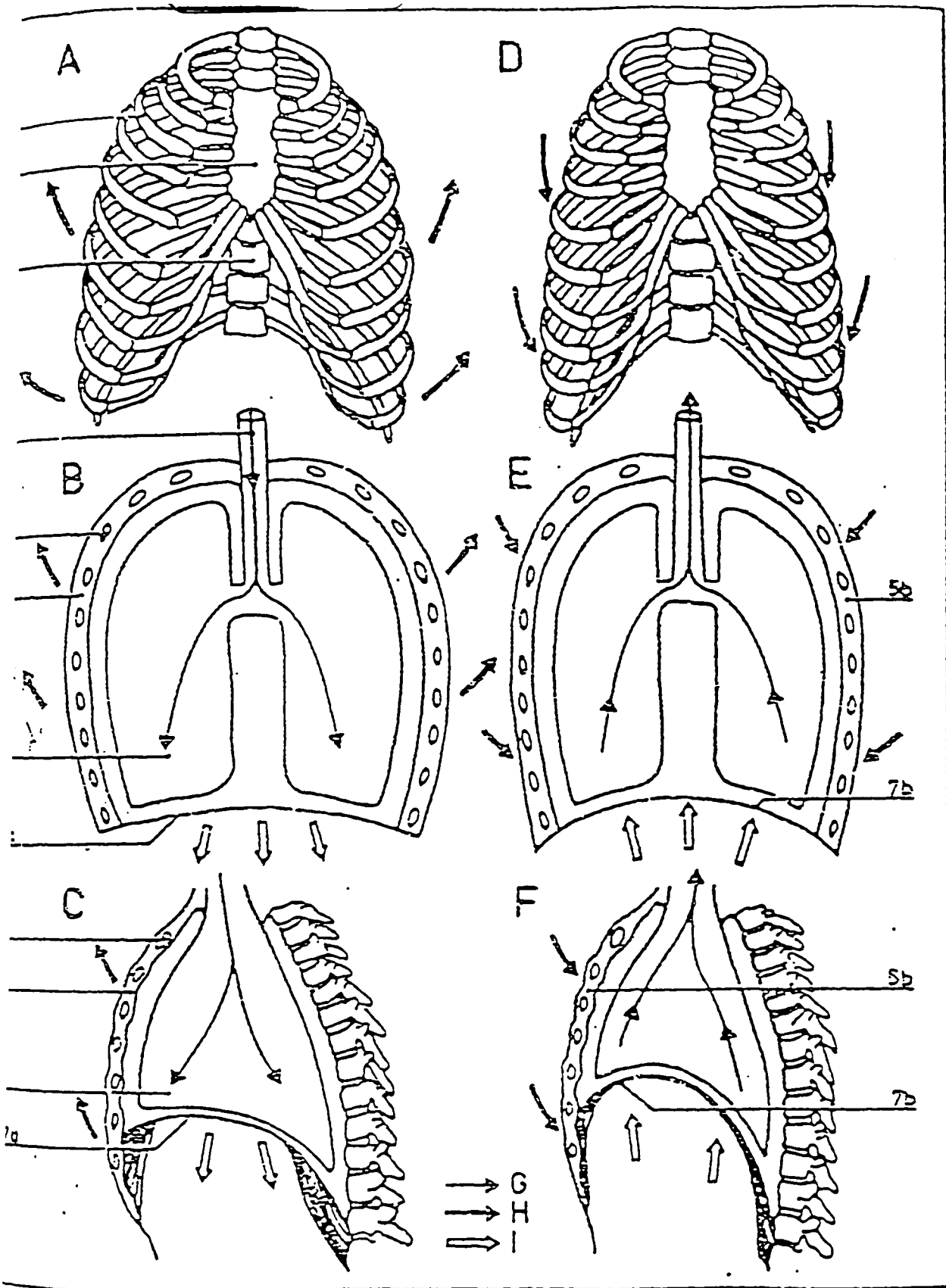
A. S, C Breathing in
(inhalation)
D, E, F Breathing out
(exhalation)
B, E Thorax section (front view)
C, F Thorax section (side view)
G Movement of air

H Movement of ribs
I Movement of diaphragm

1 Rib
2 Sternum
3 Backbone
4 Trachea
5 Intercostal muscles

5a Contracted
5b Relaxed
6 Lung
7 Diaphragm muscles
7a Contracted
7b Relaxed

THE VOICE DIARY

You will have already seen that the assessment component of this course relates to the keeping of a voice diary.

Some of the aspects of vocal change that it would be useful to look at, are noted below. While perceptual voice quality changes are sometimes difficult to identify please do note any changes that you are aware of, even if you feel them to be too subjective or too minor.

- *Changes in voice quality: This relates to changes that you identify in your voice, for example you may note that it becomes, husky, harsh, breathy.*

- *Changes in voice production. This relates to the ease with which you can produce voice, for example you may find that you need to strain or force your voice when teaching.*

- *Changes in your voice which may be stress related. Are there specific changes in your voice which you can identify as being stress induced and the result of tension or anxiety*

- *Changes in your voice which may be the result of leisure activities, for example shouting above the noise of a group or at a football match.*

- *Changes in your voice as a result of environmental issues, for example after spending time in a smoky atmosphere, or in an overly dry or dusty teaching room.*

- *If you have noted vocal changes, are there specific preventative measures that you find 'work' for you, if so please indicate what these are.*

- *What preventative measures have you actively introduced into your life style to mitigate against vocal abuse and misuse, for example reduction in the amount you smoke, changes to your diet.*

- *What changes have you introduced into your teaching practice in order to better preserve your voice, for example thinking about how the acoustic of the room in which you work may encourage you to alter vocal pitch, reducing unnecessary voice use.*

It is often difficult to 'remember' vocal change after the event so if possible write up your diary on a daily basis. If you can identify why change occurs or reasons for vocal change please make a note of that as well. This material may then be used to pin point issues of personal vocal vulnerability such as back to back teaching sessions, poorly ventilated rooms, dust, fumes whatever.

If there are any queries with regard to the diary please do ask me for clarification.

Stephanie Martin
April 1998

APPENDIX 5

*Please say your name clearly, pause for a few seconds and then
say the following vowels, extending their length for a few seconds.*

ah

oh

ay

Leave a slight pause and then read the following passage.

The Rainbow Passage

*When the sunlight strikes raindrops in the air, they act like a
prism and form a rainbow. The rainbow is a division of white
light into many beautiful colours. These take the shape of a
long round arch, with its path high above, and its two ends
apparently beyond the horizon. There is, according to legend, a
boiling pot of gold at one end. People look, but no one ever
finds it. When a man looks for something beyond his reach, his
friends say he is looking for the pot of gold at the end of the
rainbow.*

APPENDIX 6

Voice Care and Development for Teachers - Research Project

I confirm that I, the undersigned, have agreed to take part in this research project. The project has been explained to me and I give my consent for any information contained in either the voice diary or the questionnaires which I have completed, to be used by Stephanie Martin in pursuit of her research findings.

In any written description of the research, I understand that no individual will be identified without prior consent and no information will be given that could identify an individual participant. I also understand that the information that I have given will be kept in the strictest confidence by Stephanie Martin and divulged to no one other than her supervisors.

APPENDIX 7

The Victoria Infirmary Voice Questionnaire

M Lockhart and S Martin

NAME

ADDRESS

AGE   OCCUPATION   DATE

		Tick where appropriate		
		Yes	No	Only at time of hoarse episode
1	Do you have a hoarse voice?			
2	Have you completely lost your voice?			
3	Have you ever been hoarse before?			
4	Have you ever completely lost your voice before?			
5	If you answered YES to 3 or 4, did this last for: less than one day?			
	more than one day?			
	more than one week?			
	more than one month?			
6	Did your voice return gradually?			
7	Did your voice return suddenly?			
8	Has your hoarseness ever varied in severity?			
	(If you answered YES to 8) Was it worse: in the morning?			
	in the evening?			
	at weekends?			
9	Do you use your voice at home or at work during the day?			
10	Do you have central heating at home or at work?			
11	Do you work in dusty conditions?			
12	Do you ever work with chemicals?			

		Tick where appropriate		
		Yes	No	Only at time of hoarse episode
13	Do you talk above the noise of office machinery?			
14	Do you talk above the noise of factory machinery?			
15	Do you talk to people at some distance from you?			
16	Do you have young children?			
17	Do you have any friends, relations or colleagues, who meet you regularly, who are deaf?			
18	Do you have difficulty in making yourself heard?			
19	Do you find it an effort to talk?			
20	Does your voice become weaker as you talk?			
21	Do you sing while at home or at work?			
22	Do you sing socially?			
23	Can you sing notes as high as you used to sing?			
24	Can you sing lower now than before?			
25	Do you argue often at work?			
26	Do you argue often at home?			
27	Do you ever shout?			
28	Have you ever lost your voice during an argument?			
29	Have you ever lost your voice while trying to shout?			
30	Do you worry unnecessarily?			
31	Are you a tense person?			

		Tick where appropriate		
		Yes	No	Only at time of hoarse episode
32	Do you wake in the morning with your teeth clenched?			
33	Do you often sit on the edge of a chair instead of leaning back?			
34	Did you ever worry about your voice before?			
35	Do you worry about your voice now?			
	(If you answered YES to 35) All the time?			
	Only when you are hoarse?			
36	Does your job take you away from home?			
37	Does your job involve risk to your person?			
38	Could you continue in your present employment if you lost your voice completely?			
39	Have you ever had to alter your job because of your voice?			
40	Are you able to cope with your job without worrying?			
41	Do you go out much socially?			
42	Do you go out only at weekends?			
43	Do you go out at weekends and during the week?			
44	If you go out, do you prefer to go to: the country?			
	a friend's home for the evening?			
	a football match or speedway etc?			
	the local pub or dance hall?			
45	Is your voice ever hoarse or weak after a night out?			
46	Do you drink either beer or spirits?			

		Tick where appropriate		
		Yes	No	Only at time of hoarse episode
	(If you answered YES to 46)			
	Mainly at weekends?			
	Every other day?			
	Every day?			
47	Do you like food or liquids to be very hot?			
48	Do you like spicy foods?			
49	Do you smoke?			
	(If you answered YES to 49) More than 10 daily?			
	More than 20 daily?			
	More than 30 daily?			
50	Are you ever short of breath?			
51	Do you run out of breath at the ends of sentences?			
52	Have you ever had any chest trouble?			
53	Does your throat often feel dry?			
54	Does your throat feel dry after you have been using your voice a lot?			
55	Do you want to swallow often?			
56	Do you often want to clear your throat?			
57	Do you suffer from frequent nasal catarrh?			
58	Do you require a nasal spray to clear nasal catarrh?			
59	Do you have post-nasal catarrh?			
60	When you cough, do you cough up any catarrh?			
61	Do you feel any discomfort when you cough?			

		Tick where appropriate		
		Yes	No	Only at time of hoarse episode
62	Do you feel discomfort when you use your voice?			
63	Do you feel as if you have a lump in your throat?			
64	Do you feel a tightness in your throat?			
65	Does your voice seem very loud?			
66	Does your voice seem very soft?			
67	Have you ever had difficulty hearing?			
68	Have you ever had a hearing test?			
69	Did you have any abnormality of the vocal cords in childhood?			
70	Were you ever hoarse as a child?			
71	Have you ever injured your vocal cords accidentally?			
72	Have you ever had a laryngeal examination?			
73	Do you often have laryngitis?			
74	Have you ever been allergic to anything?			
75	Do you attend a hospital regularly?			
76	Do you attend your own doctor regularly?			
77	Have you ever been in hospital?			
	(If you answered YES to 77) For more than one week?			
	For more than one month?			
78	Do you take any drug regularly?			
79	Are you on any drug permanently?			

		Yes	No	Only at time of hoarse episode
80	Do you ever take sleeping pills?			
81	Do you often take sleeping pills?			
82	Have you ever used tranquillisers or anti-depressants?			

COMMENTS:

APPENDIX 8

SM   what difficulties did you experience in the transition from student to lecturer?

I8   Difficulties? I always try to look on the positive side so, I really, well I was quite nervous. It's a different kind of nerves because you're sort of anticipating and anxious when you are a student teacher and, yes it's a different kind of anxiety and nerves. Uhm, I think suddenly you take on quite a lot of responsibility all of a sudden and you're sort of looking into how to cope with this responsibility long term and you see. Really it's not a difficulty because you've got to sort of get through these things to work them out you know and learn, but, uhm, I think that was quite difficult the responsibility of all these, because the classes that I was teaching were larger than the ones that I was teaching on my teacher training, so I had to have like seventeen and quite young students and because in FE you're teaching Life Skills, I think that becomes real as well. So I think the teaching practice is quite a model situation and I think they put you in this and they are all trying their best in the teacher training college to give you a good outlook and a good teacher practice. Then you go into the real world and you start seeing the sort of seams starting to come undone around the edge sort of thing. It's not negative, I think that's reality and you've got to learn how to cope with that. But I think the state of FE at the moment is quite bad, so I think coming to terms with all these little things and the responsibility that you've got to them. And also you've put a lot in and, like I told myself at the beginning 'don't overdo it' because I'm going to have a nervous breakdown in the first few months. Because I found in my teacher training practice that I did overdo it and I was exhausted and in voice class when we were doing all this sort of analysing and seeing what that can do to your body physically and everything. So was I thinking 'Right don't' and when you're telling yourself 'don't' sometimes you still do. So I think, you know, I had a tendency to throw everything into this, especially as I was only doing ten hours a week teaching, uhm, I tended to want to make up for it at home and I was doing huge amounts of preparation for this ten hours or teaching which was just ridiculous. So I just slackened off and the nerves slowly disappeared and dissolved, so that was, you know. I think there was a lot of, it was quite a dramatic thing, you know, but it's also how you take it and I was very prepared to get a job and do it so. I didn't find it too bad. It's that teething thing and I think I'm in now. I feel alright now. I knew by Christmas, hopefully, I'd know one way or another whether it was me or not and I'm still happy to do it and I feel really confident now. I love the students and that's what I'm there for at the end of day, so you know I've got through it.

SM   That's excellent. It's just that I think that you've
      encapsulated quite a few of the difficulties there, the
      situation and the stress of the student and being sort of
      more role model and making sure that you are giving your
      best to the students and as you say not really replicating
      the situation in your practice teaching, because that was
      sort of so rather, not exactly false, but certainly they
      make exceptions.

      The next question was 'Could you identify some of the major
      stress factors within the job?.

ZB   I think especially, I mean I'm a special case because I'm
      working for an agency, ELS, and I'm not regarded as a full
      time member of staff, so I don't get staff development and I
      don't get paid to go to meetings and I don't, literally I
      just have to go in and teach. It's almost like being a
      Supply Teacher, where I go in and teach and then if I was a
      completely conscious free person, you know if I didn't have
      guilt and if I really didn't want to do the job properly, I
      could just go in and go home. And a lot of people I've found
      do that with ELS because of the system and the way that we
      are not paid in the same way. It's not abuse in a sense,
      because you understand that when you make a contract with
      ELS, but you know you choose at the very beginning, you
      know, how you are going to handle it. So I've had a few
      extra stresses, that a full time member of staff might not
      have because of copying with how you work the ELS out and
      how you work this agency situation out. But I think a
      teacher in general has a lot of stress because catching up
      with colleagues to talk about students is difficult because
      you all have different hours and so you know you're running
      around at an amazing rate. Also sometimes students are very
      difficult and they are very wearing. You plan a lesson to do
      what you want to do and you end up digressing from that and
      doing exactly what they want, because they are very
      demanding, they're like children, they demand and they ask
      you all these questions that aren't in what your lesson plan
      is about. So you end up sort of going on helping them, and
      usually it's problems, like personal problems, money
      problems and financially. They're not happy with the way
      you're teaching them, this is not what they're expecting,
      'Miss, you're doing this wrong' and they are very critical
      and it's quite a strange thing because they are very
      forward, very direct, the students of today, especially in
      the college where I am in   The type of student that
      comes in, you know, they're very and so you don't actually
      spend much time doing teaching, you're actually spending a
      lot of time on life skills and classroom management. And
      strategies to get them concentrating, because they will do
      anything to get out of doing some work and especially as I
      am a cookery teacher I have to get them concentrating on job
      in hand because in one particular case, in one lesson that
      I'm doing where they have to produce for a restaurant, we

ZB start in the morning at 9am cooking and they have to be
    ready for 12 to serve how ever many people might come in and
    to get them concentrating. Otherwise you end up doing all
    the cooking and that's not what you are therefore. You're
    paid, but you're not paid to do the cooking, you're paid to
    teach them how to cook.   Perhaps they are NVQ mums or
    whatever it is that they are doing, so those lessons, the
    three hour, well three and a half hour, no it finishes at 2,
    so that's four and a half hour lessons can be as much strain
    as eight hours, because you are doing double. You're
    shouting, you're, you know you're supervising a herd of
    (laughter), it's almost like you've got to round them up
    like cattle. 'Get back in here', because they got out.
    They're not supposed to leave the classroom and some of
    them, because you've got mixed abilities, you've got people
    with learning disabilities, you've got moderate disabilities
    and then you've got the good ones. You have to sort of keep
    the good ones occupied, to keep the ones that are not so hot
    and the ones that have really got difficulties and you have
    to think of all these strategies. So really it's best not to
    do a lesson plan, because in those situations, you know,
    you're never going to stick to it. You have to be
    spontaneous and think 'Alright well,   playing up,
    he's got a mood swing, he's having a bad day and so I'll
    have to put him on something that's going to really bring
    out the best in him, you know, not just mince pies, or
    something easy, which we've done for the last two weeks to
    keep him quiet and out of trouble'. With mixed abilities.

SM Are they all mixed abilities classes that you've got?

ZB At Southwark they have to enrol maximum, because the college
    is in dire straits financially, so their motto on enrolment
    day is 'get them in bums on seats'. So it is one of those
    cases, I mean I work in another college, and actually the
    other college where I do two hours a week, which is
            College which is part of   ·-   · University, I
    thought it was going to, be similar to the way this
    university is run, but there also in financial difficulty
    and their motto is 'bums on seat' as well. So they bring in
    quite a lot of, how can I say you know, mixed abilities and
    just get them in, pack them into the courses as well

SM So it's not particularly scrupulous of these people is it?
    Because I mean at the end there must be people who are quite
    disadvantaged by being with a group where you're not
    actually able to concentrate and give them

ZB It also sort of actually coincides with the lifelong
    learning and everything, because they do want to give to the
    people where they don't miss the opportunity. You know you
    can't sort of turn around to a student and say 'the levels a
    little bit high for you this year, come back next year' and
    then it might be the same again the following year.

You can't keep turning people away and FE have decided on a lifelong learning strategy, which I am totally in agreement with and I would support 100% and so you know I've got to shoulder the storm, but it is causing, I mean they could think it around so that they sort of allow to have at least one level and maybe another two levels, but they just haven't got the money, you know, to pay the teachers to come in. I mean one three hour class I got just by chance, which was very lucky, because a group they enrolled far too many, they enrolled 28 students and one woman, who normally does that class herself, she's normally had about 18 or 19 up to 20, the kitchen is terrible because it's all Health & Safety as well, and just because it went a little bit over she was allowed to split it which got me three hours pay. But still because of the way that they enrolled and the way that they pack them it's amazing, you know we talk about it together and we say the amount of abilities. I mean we could have done it, I mean she tried to do it in the way that she gave, I mean she did split it in a way that she had, the ones that are a little bit better and the ones that are a little bit worse, but still you've got all these different, I mean I could tell you some stories. I mean I've got a gentleman that comes in, but probably you haven't got room on the tape or if you don't want me to.

SM   Well you can tell me afterwards.

ZB   It's amazing.

SM   So the next one is 'What vocal changes did you note during the term?'.

ZB   Whew, I'm exhausted now. I started off very fresh and I'd done a lot in the summer too, you know a lot of things, your things in the book, a lot of things that we learned on the course and I do, I do that. I've got this spray. I say it's for the plants, because I spray the plants because it's quite hot and I'm actually doing it all the time around the flat. You know, I've learned a lot from the course and the book and I do try to practice. In the summer I really rested and I tried to prepare myself because I didn't know until the beginning of September that I'd got this job but I was still hoping and I was hoping that I would get something in September. So I relaxed and I didn't go on holiday, I worked, unfortunately I couldn't because financially I couldn't do that, but I got a job as a telephonist, well not telephonist, reception/telephonist and like I was thinking 'Oh Stephanie will kill me', you know. But I made sure I had, you know, a   thing, because a lot of them don't and I was like really pushing that, because it's amazing how many places don't have that. Anyway I started quite fresh I think in September, because I rested, you know, and I ate properly and I was doing lots of exercises, I always do in summer anyway, I did a lot of running for charity.

SM   Oh, I see.

ZB   Yes, I was doing a lot runs about that time, so I was really
      physically fit and that helped me. When I started the job
      and I was cycling to work and everything, I felt great and
      then like I gradually felt the changes in body and like
      everything because you sort of change, you start to become
      more tired and you start to become quite fatigued, it just
      that it just takes over from, it's all the racing round, the
      anxiety, and like with me the anxiety of not having a full
      time job either.   I'm always looking in the TES, every
      Friday I go to the Job Centre to look in the TES, take down
      all the notes, sort of thing, well you don't want to hear
      that, that's extra. But I think that generally it's the
      strain as the term goes on and all teachers say it or most
      of them croak it. Most of them, I don't think many of them
      had done voice training or a voice course. It wasn't around
      when they were at college, which I had the fortune to do, or
      they've never heard of it or they don't do it in staff
      development in colleges it's just not offered. So you say it
      'Have you done a voice training?' and they laugh at you and
      say 'what's that'. They don't take care of their voices, a
      lot of them smoke, a lot of them drink heavily, which I
      never did before the voice training, but I totally cut down
      on it, especially when I'm a teacher because it tires you. I
      don't know what to say. It has changed, I mean I'm not
      mentally doing the things that we learned about throwing the
      voice and taking it from plants, and that sort of really
      good advice that you gave on the course, because I find that
      quite difficult. I think I'd have to read your book again,
      because I read it once but I know that it's always the
      second time that you've read a book that you actually start
      doing it properly. And I know that I'm doing things wrong
      with my voice because in the kitchen above all that
    • machinery, and above all that, I'm sure there are things I
      could be doing. I spend my time shouting, I've actually come
      out of the lesson having lost my voice and I've gone into
      the next one in the evening, because I do one sometimes, I
      go into an evening one, and I tell the students 'Right I'm
      not shouting today, I've lost my voice, so you're going to
      have to be good'. Or I write it on the board and I do lots
      of things to get out of talking a lot. As you can see, I
      like talking anyway as well which is a difficulty, but I'm
      having to sort of change. Uhm, I'm just having to cut down
      on the amount of talking I do, and screaming and shouting

SM   Right. And equally now that you're feeling more tired that
      will be reflected in just how you are able to manage
      yourself generally and exhaustion does have a huge effect on
      the voice.

      And you've said, which is the next question, 'have you had
      any periods of voice loss? and you've said 'yes' to that. I
      mean how many times has it gone?

ZB   Well in the beginning, because I wasn't used to it, and I think I was really shouting, I was really abusing my voice and I was totally, I don't know, I was quite scared actually, because I said to my partner, who is also a teacher, you know, 'I just can't go on'. I really didn't think I'd get it because I'd gone through the course, and I thought 'what am I doing wrong?. So in the beginning it went a lot more and now, because I've relaxed and I'm tending to really get a good night's sleep, I've been going to bed early. In the beginning I was like staying up until midnight and getting up early and that was like tiring me as well. So you've got to realise that as a teacher you've got to make sacrifices and you've got to say you're not going to stay up late, you're going to bed at ten, and then you can face the day and you've had a good rest and you can really, you know, tackle the day. And so I'm learning every minute, you know. Tomorrow I'll discover that I've done something better than I was at the beginning.

SM   Yes, because it is a very steep learning curve isn't it? And particularly thrown into it.

ZB   But you, like you scared me, because in your book you put students leave. Like they have to give up, not because they want to but because of the physical requirement. And I was thinking that I love teaching and if I have to give up because my body gives up that's going to be awful.

SM   But equally, I think it's interesting that you've got a very strong sense of mind/body awareness when a lot of people don't and they keep on going and then they find that they're just completely wrecked without realising it.

ZB   Yes. I'm looking at a lot of teachers in the staff room, the photocopy room and I'm watching them and I'm thinking 'I don't want to be like that'. I know they're a little bit older than me and I'm gauging myself in five years, ten years to see what it would be like. And just, you know, just from talking to colleagues and people, there are so many that are really, that have got bad health problems and it's not, I think the teaching is a hazard, like any other thing that you do badly in your life, you know you can abuse your voice, you can abuse your body, you can abuse, you know, a lot and it can be so discomforting. I'll have to tell you this, I don't know whether I'll tell you after as it's another thing that's just come to me!

SM   Right. So the next question is 'have you thought that your voice was equal to the task?'. Well, basically not really in that case.

ZB   Uhm, no because I'm probably not doing, you know, I'm probably not, I don't think I'm doing the maximum I could do.

SM   Right.

ZB   I think if I'd have had a training to be an actress or a
     singer and I watch them on television and I'm thinking of
     you. I'm thinking they must have real discipline, because
     they must be drinking lots of water and they must be doing
     all these amazing things. They must have really fit bodies
     and minds to cope with using it as a singing voice can, you
     know the opera singers. You know they must have huge
     discipline. I don't know whether we do as teachers, you
     know, the common people that go through life, you know. They
     are aiming very high, they're getting high salaries and you
     know for the salary that we get a lot of people might think
     that it's not worth it. You should do it for yourself and
     not for the salary, but I think it's a very thin line. I
     think people

SM   And also I think that you have to remember that they've got
     a reportoire that they're singing, the singing is
     orchestrated and the play they're playing. Whereas with a
     teacher the vocal use is in life, well it's accompanied by
     high periods of stress, so that you haven't got a script,
     that you just

ZB   It's all spontaneous.

SM   It's so spontaneous and it may often be a response, as you
     say, people leaving or people doing something, particularly
     in your line of work, where people actually injure
     themselves on the machinery

ZB   It's quite nerve wracking at times.

SM   So there is a whole lot of tension and anxiety with the
     speech as well.

     Are there any strategies that you use to maintain your
     voice? Now you've obviously mentioned water and getting
     rest. Anything else?

ZB   I gargle now and again if I start to get a sore throat or
     something, but strategies, sometimes I don't speak. I just
     give it a rest, like you said and my boyfriend finds it
     quite strange and says 'You've got quieter' and I say to him
     it's probably my voice training, because it's really weird.
     But you know I don't go to pubs with the loud music. I
     really didn't do that anyway, I don't enjoy drinking and
     things like that so it's not really a big deal for me. And
     the smoke and all these atmospheres, polluted atmospheres
     and things, you know. I try to use less chemicals in my
     house and I think all these things I've always been aware of
     anyway it just highlighted it for me, the course. But they
     are just little things.

SM   I think the combination is quite. Yes

ZB I'm trying at work to be conscious and not abuse my voice when I'm teaching and not shouting really loud, like I'll come down, and actually, I mean I make it clear to them sometimes in the classroom, I'm not going to shout at them. So if I've said something and you've missed it, then ask a colleague and do all these little things. Because they keep coming up to you and saying 'what did you say?' and 'can you repeat that?. And if it's a long schpeel and you've got to repeat, aah this huge amount, and some people they come in like five minute staggers, like late, and I've just done the brief at the beginning of the lesson of what's got to be done in the next three hours and 'can you say that all again?'. And you say 'excuse me but do you think my voice likes this?' and I joke with them but they, and they don't know. The students don't know the complexity of what I'm saying and I say 'ask your colleague' and they think I'm being horrible. (Laughter)

SM No, no, but I think that's what you've got do. Someone else said that she was using a similar strategy but she now doesn't repeat it she just says 'you'll have to ask' and not repeating it. Oh well I mean cumulatively you're doing quite a lot. I mean think how much worse it could have been if you'd not done any of those things.

ZB If I hadn't had done the course as well.

SM So is voice care seen as important by fellow staff members?

ZB No. No. Like I say some of them, you know they don't understand and I find that strange. I mean a lot of them have been to ⌐   as well, so I don't know, I know you've been doing it for a few years here.

SM Well only your year. Last year.

ZB So it's strange. You know staff development and things like that, I've never seen, and I ask my colleagues. So we feel quite fortunate. We don't know how widespread it is and how important it is, but I definitely think it is.

SM And have you become more, you have spoken a bit in response to this already, but have you become more comfortable in your 'professional role? And have you done so have you noticed any change in the way that you use your voice?

ZB I think, yes because I more relaxed, especially now, nearer to Christmas. The last couple of weeks, I've become really relaxed because I know my contract is going to be renewed in January and I know where I'm going until June. I know after June that will be it, then I'll have to start worrying again in the summer. But I think also that you get to know the students and the students warm to you.

ZB   The first month is terrible, because you don't know whether
     they like you and you're always anxious and I think you're
     going to be like that for your first five years while you're
     settling in and, you know,   really getting to grips with
     being a teacher. You've always got doubts that you are not
     meant for this profession. You know there are those doubts,
     but professionally, it's awful again because I don't think
     I'm allowed at the moment to feel the full benefit of a
     professional as I'm working for an agency.   There's all this
     sort of complication. We had a big sort of lecture on it,
     like a sort of careers talk or lecture thing before going
     out into the big wide world at the end at Greenwich as part
     of our our teacher training, saying that one of the things
     that you are going to experience through your career as a
     teacher, you know you can either go down the road being a
     full time member of staff, you know, or you can work for an
     agency, or you can do supply, or you can be a part time
     teacher and still pursue research. There's so many avenues
     and facets, you know, and ways of being a teacher. You sort
     of know that but then when you actually get into it, if
     you're not 100% confident and I'm not, and I rather be in a
     secure role, in a secure job as with a proper role and then
     I would feel more professional. But I think at the moment, I
     mean I do feel professional, of course I feel professional,
     I've advanced in leaps and bounds since finishing in June. I
     do feel and I don't think I'm the right person to, well, ask
     that question yet. I think maybe my first job, my first full
     time job, when I'm in a secure job and feeling, you know,
     then I'll have much more chance

SM   To feel like a professional?

ZB   Understand and experience all those things, but at the
     moment I feel very much like a supply teacher. I'm a
     professional, because you've got to be a professional and
     you've got to, I don't know, you've got to be, you know,
     that way, but it's very difficult in a situation, so I don't
     know.

SM   So have you, but what you have done is that you've become
     more confident even in terms of say

ZB   I'm more confident

SM   saying 'I'm not going to repeat that', so using your voice
     in a different way. So that is, as you say, an experience
     thing.

ZB   Accepting that you've got to be very flexible, not only in
     view of all the other things, like attitude and
     communication and students, but also with your body because
     it can give out, it can give up and especially,

ZB   I mean, I'm so glad that I'm having this interview because
      it's all bringing it all back to me how important it is and
      I think you have got to be flexible. You've got to say well
      if you're going to be a teacher you don't just accept the
      role of teacher you accept the role of being a good teacher,
      of being a good role model. Because don't forget that the
      students are also learning, they're being conditioned, very
      you know, from watching you, from eyeing you up. And if you
      spend all your time shouting then they're going to think
      that's the accepted thing in life and I mean I just had to
      give that up, because I was terrible, I was shouting all the
      time.   I really changed that and my voice was better for
      that.   It's very easy to want to shout at them, you want to
      see the things they do! (Laughter)

SM   I can imagine!   Any other comments just for the purposes of
      the tape,   ·, anything I haven't asked you that you feel
      you'd like to discuss? Or has that about covered it all?

ZB   I don't know. I mean what is the chance that this voice
      thing will sort of take off and that people will get to know
      about it? Because I mean, I'm in the few.

SM   Yes, I mean I'm very hopeful that if this works out and even
      in such a relatively small scale study then I could, say,
      take it to the Department of Education or whatever and say
      'Look we've noticed changes and these are the comments from,
      albeit, a small group, could we then look at a much wider
      group of people?'. And obviously there are moves afoot and,
      interestingly, quite a lot of work now within the EU, in
      terms of Health & Safety and issues surrounding that for
      the teaching voice and the professional voice. So I think
      that it'll maybe come from a number of different areas, but
      perhaps driven by things like an EU directive, which will
      then cause people to think about what they're doing and
      equally the lack of support that they give teachers and the
      fact that people are so driven by money. You know, 'it's too
      bad you've lost your voice, but you'll have to come in
      because we can't pay a supply teacher'.

ZB   Do they do it in other countries? Like in America, Canada
      and all that? I mean you must have studied this in other
      countries.

SM   Yes, but America's actually got very little at all, it's
      even in a worse situation that the UK. I mean interestingly
      enough Finland is one, where they are actually looking at it
      in more detail. But, there's not a huge amount in Europe at
      all.

ZB   It's amazing that Scandinavia is so health conscious,
      environmentally and health ways it's great. I mean we should
      take such a lot of meaning from that, just anything. I mean
      taxes on petrol and that sort of thing, they really know
      what they're doing. It's such a shame.

ZB   But, I mean our education system is in dire straits and needs money pumped into it from so many different angles, that's why it is difficult to envisage something like that happening.

SM   Yes, because people will say 'oh well there's so many other things that should be in the curriculum'.

ZB   You can't afford to do voice training. That's why it's so important in University because while you're doing your training on this you can be made aware of it. So stay at Greenwich and go to other Universities (Laughter).

SM   Well I keep pushing on.

ZB   Well actually a lot of teachers that I've met haven't got the PGC and haven't got the full certificate and they are in there, they're getting the salaries, they're getting really good jobs, because they've proved themselves over an amount of time and because it's not legal, and they're hoping to make it legal that you have to have a certificate before you can teach, but there are so many of them in there and they've never really considered it, they haven't had the chance to go to university and haven't heard about it. They don't know the analysis of teaching, they don't know the psychological and well they haven't learned the theory. So they're just in there, they're doing the job and I think they're so

SM   They very vulnerable.

ZB   They're vulnerable. I think.

SM   Well thank you very much for that. That's great.

SM   what difficulties did you experience in the transition from student to teacher?

RN   Uhm,

SM   Professionally

RN   Professionally, I think the most, the thing that struck me hardest has been the level of responsibility that you take on. Like with   n, I've got Year Six's and Year Five's, so it's a mix, you know, two years mixed. We've got the 11 Plus coming up and, uhm, you know responsible for sort of advising what should, you know, what recommendations for those children who are sitting the 11 Plus in January and I found that quite difficult. It's, I'm in a school which is in the area that I lives, so it's basically just a mile up the road and in fact it was   school

SM   Oh right

RN   so I know the parents and I found that quite difficult with this 11 Plus business, uhm, and it was sort of, not only that but it's the sort of responsibilities generally that I've had to cope with because the staff is not stable there, they've had huge change around, uhm, the girl in the class below me, there's only four teachers, but she's an NQT and she's young and she's nearly found it too much.

SM   Oh

RN   and so there's been quite a lot of sort of problems really trying to cope. Uhm, you know, as I say the staff aren't there so when it comes to things like rehearsing children for Christmas because I sort of the oldest, you're the oldest one, you know I've had to do it and I've found that very difficult to sort of organise everything and what have you. So it's been quite a business really.

SM   Did you take on that sort of responsible role? I mean was that something that was used in deciding you would take on? That was actually imposed?

RN   No, no. I was, yes imposed on me. Yes I wouldn't have done it out of choice, but, you know, I'm on a, I job share but because I live so near there's been a lot of 'oh can you just?' and 'oh can you just nip up?' and 'oh can you?' and 'oh can you just do planning for next year on your days off?' etc etc, you know, it's been a bit like that. Uhm, so I've found it quite difficult really to cope, yes.

SM   And not, I mean again probably as   was saying, nothing that could have been given to you from college, because these are experiences that just develop out of changing and learning I suppose in terms of moving into this professional mode. So even if it's discussed, these are not things that you could actually have been taught.

RN   No, you just have to experience it. Get a body of experience I think and sort of, but it's taken all my, the sort of confidence that I've had to be able to deal with it really, you know, I found it hard.

SM   And if you'd been, I mean much younger, that obviously

RN   No, couldn't have done it

SM   couldn't have done it, because that's obviously what's happened to the younger person

RN   No, I wouldn't have been able to do it

SM   Right. Yes.

      So can you identify some of the major stress factors within the job, other than the ones you've mentioned, responsibility and the additional work and things.

RN   Uhm, I think the level of where the children are at, because some of the Year Five's are very poor, uhm, you know, they're operating sort of at Level 1.

SM   Oh right.

RN   Uhm, you know, we've got 13 Special Needs and I've got a deaf boy and the room is very very difficult for him, so I wear a transmitter and he wears a receiver, but he has to watch all the time and his behaviour has deteriorated during the term because his hearing has gone down a lot, as he's had a big loss this last part of the term. So that's been difficult, but you've got on the one hand some of the Year Six's who are working sort of, you know, at sort of Level 5 and these other ones who are working at Level 1 and it's what you give them all that they can all do.

SM   Right.

RN   The Literacy Hour's a pain in the neck, (Laughter) dividing us all into five groups and shuffling around the room every morning and then you do, we've got four maths groups within the classroom, so you know you get yourself organised for Literacy Hour and then everyone has to stand up, move round, shuffle the desks around and acoustically it's a rotten room. So much so that I can't hear a child answer me at the back of the room

SM   Oh, my goodness.

RN   So it's been very difficult to cope with.

SM   Yes, yes.

RN   Uhm, yes, just you know all those things and tiring.

SM   And tiring yes.

RN   I don't have a desk or a chair.

SM   Oh you don't?

RN   So I have to stand all day that's the other thing. This is the new Head's new regime, so we all have to stand up all day.

SM   Good grief!

RN   I find that very difficult.

SM   What is that to, I mean how is that supposed to be?

RN   Well I suppose you can circulate and sit with different groups,

SM   Oh, I see.

RN   but the way the classroom operates there isn't actually anywhere to sit down. I don't even have, there isn't a spare chair, so I stand all day and I do find that, and in fact I had this sort of throat thing this, uhm, second half of the term, lost my voice, felt rotten and then had another 'flu thing on top of it and I couldn't stand up all day,

SM   No.

RN   I just couldn't do it. So I had to ship a chair in myself, and thought 'blow it, I'm going to sit down' you know.

SM   It's physically just exhausting as well as everything else.

RN   Yes, absolutely. (Laughter) It's a hoot really isn't it? Why are we doing this? The money's nice.

SM   Oh dear.

     You mentioned, when we were talking earlier, about the sort of vocal changes in that you felt that your voice had got lower. So what I was going to ask you was 'what vocal changes did you note during the term?'. Obviously the voice getting slightly lower, and then any other things?

RN   Yes it felt very tight.

SM   Did it?

RN   at times, very tight and that was in spite of sort of
      knowing from my singing lessons year ago, you know how to
      relax your throat. I just couldn't do it, I was so stressed
      up and having had these two bugs, which made me feel rotten
      anyway, uhm, one of which, you know, we all lost our voices
      up there everybody, actually lost their voice. So, you know,
      it was, I just, everything tightened and you haven't got the
      energy or, emotional or otherwise, to actually think about
      sort of trying to cope with exercises or anything like that.
      I found it really difficult.

SM   And was it, I mean very often that sort of tightness and
      pain is a muscle tension thing

RN   Yes

SM   as opposed to actually anything the matter with the vocal
      folds, but obviously if you were tense and stressed that
      would be how it

RN   I think it reflects

SM   would be reflected. Yes.

RN   And this difficult classroom acoustically means that you
      have to speak quite loudly. But I found hearing them was as
      difficult

SM   Is as difficult?

RN   Yes, I find I can't hear them and likewise if you ask a
      question they can't hear each other.

SM   Well, I was going to say

RN   So you have to then repeat the answer, but I have to repeat
      it anyway for   the deaf boy, because if he can't see
      the child that is answering the question he doesn't know
      what the answer is, so I have to say it again anyway.

SM   Yes.

RN   Uhm, but that's quite hard actually and he's very disturbed.

SM   Yes.

RN   A very disturbed little chappie. Poor old sausage.

SM   So, you've had one period of voice loss. Were there any
      other periods of voice loss?

RN   Uhm, no I was fine until Half Term, it was after Half Term
      that it's all gone down the pan really.

SM   Right.

RN   Uhm, and I think that is a mixture of being, I was doing
     more days, I'd been working in the Infants for some of the
     week and in the Juniors for some of the week,

SM   Oh right.

RN   which has been an extra added challenge.

SM   Right

RN   And this sort of, because we are a small school with no, you
     know the Deputy Head's having a baby and there's no-one
     really, you know the Headmistress has been teaching for
     someone else, we've had to take assemblies on a weekly
     basis, which is just not to be recommended really.

SM   No, no.

RN   And, you know the whole thing has just got to me basically.

SM   So you've been virtually working full time because you've
     been filling in then?

RN   Yes, not full time, I've had a day off a week.

SM   Oh you've had a day off, but more than the job share really
     anticipated?

RN   Yes, yes, more than I would have done, but after Christmas I
     will go back to my two days, after an initial period of
     working full time.

SM   Oh, I see.

RN   then I'll go back to two days and that should be alright
     because she's got to employ two more members of staff so
     that will be alright.

SM   Right.

RN   Hopefully.

SM   Have you felt that your voice was equal to the task?

RN   Uhm, I think I've taken it for granted and I think I thought
     that I wouldn't ever have any problems with my voice and I
     have, you know, in terms of I think that the strengths, I've
     got the strengths but it's like the register as you say,
     you're tense, you know?

SM   Yes, yes and that's probably been quite a surprise because
     actually your voice was

RN   Yes, I always thought my voice would be no problem at all,
     but I can feel it being, playing up.

     Another voice .   ') Because you never had problems   on
     teaching practices did you?

RN   No, but we haven't got anything in the room to, it's a very
     high ceilinged room

SM   Right

RN   and it's tiled floors and the sound just bounces.

SM   So you've got one of these really bright acoustic

RN   Very bright, which is awful for   He needs to switch
     his hearing aid off all the time because he can't stand it.

SM   So you have to actually really, if you speak more slowly and
     slightly lower the pitch if you can, then that will
     counteract that to some extent.

RN   Hm, hm.

SM   But that again is not always possible either

RN   Hm, and I think with the Literacy Hour you're speaking for,
     you know I'd be conscious of this huge input of teaching,
     uhm, which you may not have had to do prior to the Literacy
     Hour, with this, sort of all this kind of you have to keep,
     you're keeping talking at them for such long periods, you
     know, and that requires such intense concentration.

SM   Yes, so the combination is absolutely dreadful?

RN   Yes, I found it very stressful to keep going sort of at
     level really.

SM   Are there any strategies that you use to maintain your
     voice?

RN   Yes, I've tried to bring it down pitchwise, I have thought
     about it, uhm, and I tend to clap rather than, to get their
     attention, rather than to try to get it, uhm because the
     trouble is half the time they can't hear me.

SM   Right

RN   I can't hear them and they do chatter, they're bad
     listeners, they're not good.

SM   Right.

     Is voice care seen as important by fellow staff members?

RN   No, not in the slightest! No, not all all. No.

SM   And what has happened when people have actually, I mean you said that everyone had lost their voice? I mean was it a question of people just struggling through?

RN   Yes, we just struggled through really you know there wasn't any, uhm, time off, I had one day off but nobody else had a day off, you know, it was just sort of managed really.

SM   Is it still perceived as just part of the, it comes with the territory?

RN   Yes, I think that was a specific virus that was going round.

SM   Oh right.

RN   But, yes I think, you know voice or not, people don't, you take it for granted and they don't take much notice of what's happening at all, you know. And the Reception Teacher only has fourteen children, so she didn't have, she wouldn't have occasion to use her voice hugely and she's got carpet. I'm just trying to think, the next teacher up has got carpet so that's not so bad, it's just the two Junior classes and the other NQT's got quite a big voice

SM   Right.

RN   which I don't suppose she thinks about, so it was me really and she's got a better classroom in terms of acoustics, so it was me that had the biggest bother.

SM   I mean acoustics is incredibly important.

RN   Yes, absolutely.

SM   To just fight against that is actually very very mentally tiring

RN   I find it tiring and it's hearing. It's so tiring trying to hear the children and I keep having to say to them all the time 'I'm sorry I can't hear'. You have to get everyone silent,

SM   Yes.

RN   without moving an inch, nothing, you know because if someone tips a ruler on the table you can't hear, you just can't hear what people are saying, it's that bad, you know, which sounds amazing, but, uhm, it's quite hard,

SM   Yes.

RN   along with the standing up which is the other thing which is a nightmare really.

SM   Of course, desperate.

     As you've become more

RN   (Laughter) A career move is necessary!

     Background Laughter and asides

SM   This is probably not the right adjective is it to use, but I
     was going to say as you've become more comfortable in your
     professional role, have you noticed any change in the way
     that you use your voice?

RN   I'm not as anxious as I was at the beginning of term, but I
     am more stressed. I'm not as anxious, I was very anxious
     when I first went in, very anxious to get everything
     absolutely right and I couldn't sleep, you know,

SM   Yes.

RN   and I was all sort of keyed up. I don't feel like that any
     more, but at feel, you know at the end of term I was just so
     stressed

SM   Right

RN   and so tired that, uhm, no, I'm alright now, but I just
     slept for hours.

SM   Have you? Yes.

RN   And I just couldn't get out of there fast enough. I had
     everything down off the wall on Friday afternoon, all the
     displays were off the wall by half past three and I was out
     of that door, I can't tell you how fast I went.

SM   Right. Yes, just to try and of course two weeks is not that
     long, but I suppose it's just a question of

RN   And I've got to write all the schemes

SM   Oh, of course.

RN   for the next term unfortunately, sadly. They're going to pay
     me for one day doing that, but, uhm, it's going to be and
     then we are back into the 11 Plus straight away, which is a
     bit of a worry.

SM   Any sort of reflections that I haven't accessed in terms of
     these questions? Any reflections you've got?

RN   I think the physical tiredness affects and I think that this
     having to be on your feet probably affects my voice, because
     I have got so drained physically, uhm, I don't know that I
     could do it every day to be honest.

SM   No.

RN   And the struggle when I go back, but, uhm it won't be for long fortunately, but I think that's probably has a bearing on it. And also trying to sing these carols has been a nightmare really, and you know I think that the combination of trying to sing and trying to

SM   has been too much, oh well. Thank you very much.

RN   I hope that's helpful.

SM   what difficulties did you experience in the transition from student to lecturer?

TS   Uhm, difficulties? With the actual teaching?

SM   Teaching, yes.

TS   Standing in front of the class and, uhm, I think my biggest problem at   has been, uhm, discipline in the classroom. They are GNVQ students, very multi cultural assortment, a couple of the classes have no English students and the foundation are so naughty that I did, you know when I first started, I found myself flying into terrible rages and screaming at them, which I don't do now, I don't let myself. It was effective because they sort of would stop in their tracks and be so surprised that you'd got into such a state, but you know. But also the classrooms, although it's a beautiful building, I don't think it's been designed too well because you can hear the classroom next door and on one occasion the teacher next door ran into the room saying 'Is everything alright?', because I really screamed so hard and it was just rage that, you know, just flew out. So classroom discipline, finding ways to sort of command authority. Other difficulties? It was amazing actually from my six week teaching practice, which was completely nerve racking, every lesson was, you know, because we did it with the lesson plan and you know it was really nerve racking. And then, you know as I've told you, I hadn't applied for this job and Hackney came back to me so that was lucky and they asked me to cover. And from day one, it was amazing, I wasn't nervous going back into the classroom and that was really odd. I don't know whether that was because actually passing the course sort of made me feel, you know, that it gave me the confidence, you know, that I was of the standard. I suppose from the teaching practice it did get a little bit easier, but on the whole it was really nerve racking.

SM   And that didn't happen at all then once you got out in from of all these people?

TS   No it didn't at all. A couple of, I knew a few of the students that had gone on into the next year, but you know as I said, the foundation class I didn't know them at all and, uhm, I don't know whether it was because, you know, the senior lecturer 'phoned me one day and I was in the classroom the next and I didn't really have time to worry about it. Plus it wasn't known that the, we weren't going to be monitored so closely. Maybe it was because I felt like they'd called upon me in an emergency, so if I hadn't got a million and one things planned out it wouldn't be so bad.

SM   Yes.

TS   But that was you know and I spoke to, and there's two of my
      class at   as well, which is great. I didn't discover
      that for a few weeks, but all three of us said that. Wasn't
      it strange how, I think maybe the pressure of the teaching
      practice and keeping all your records and having it done
      completely by the book maybe that was

SM   So in a way maybe that was probably a bit of a *Baptism of
      Fire*, so in a way that was easier?

TS   Yes

SM   Can you identify some of the major stress factors within the
      job?

TS   Within the organisation at   one stress factor has
      been, for instance I have been very eager to get my students
      on to computers and the Internet, because I think they would
      concentrate more on the screen. It's been very frustrating
      at   they don't seem to have a timetable for the
      Computer Suite. So I've had about two lessons last term and
      one this term with the same group, where I had supposedly
      oraganised the room for them and we'd gone there and after
      half an hour another class came and said 'No, we're supposed
      to be in here'. So it's frustrating, the actual organisation
      of the College that I feel how can they not have a timetable
      for the computer rooms? And last term they said 'oh we
      haven't done them yet', but you know you'd think that this
      term they would've and you just think well what was. I think
      that there is animosity between the management and the
      teaching staff and communication isn't very good and I don't
      like that about it as a teacher. That puts me off completely
      because it's so political. And also the teachers themselves
      don't try to change anything. They never change anything. So
      that's frustrating. But in the classroom I just think it's
      students not, I mean you wonder why they are there. Their
      time keeping is disastrous, uhm, their unruliness in the
      class is awful, by and large, and, you know, they do seem to
      have quite, uhm, a negative attitude.

SM   Really?

TS   Yes, you know not getting the assignments back.

SM   Gosh. So is that, that's strange isn't it when? Or perhaps
      it's because they can go there and they're not on the Dole
      and they don't have to look for a job.

TS   Yes, it's you know the frustration is trying to really get
      them to see that it's up to them really and not. What's the
      point, you know, where are they going?

SM   What vocal changes did you note during the term?

TS   I'm, I've consciously have noticed, that I seem to be more
      deaf than any of the students in the classrooms, because I
      have to, you know, I have to get them to repeat their
      answers so much and I think the acoustics of the classroom
      aren't too good for hearing. So I've noticed when I sort of
      start to shout or go a bit shrill, I was noticing that I was
      sort of getting louder to get myself across, maybe because I
      was thinking that 'I can't hear them properly half the time,
      can they hear me?', and also to try and keep their
      attention. And I think my voice, you know, I was tending to
      get higher and higher, and through experience and maybe a
      little more cofidence, I've used my breath more to go on the
      level and try and keep my voice sort of stronger without
      shouting. So I'm sort of trying to stop myself from going
      like that *(raised voice to demonstrate)*, to get my point across.

SM   Right, have you had any periods of voice loss?

TS   No, fortunately. I think, uhm, I often, you know I try to
      tell myself 'bring water', you know I should take water into
      the classroom because I can find myself, you know, talking
      myself dry. But, uhm, no I haven't and I just kind of think
      that my hours have been dotted over, you know just twelve
      hours over the course of a week. I don't know how I'd fare,
      you know, if I was in a school teaching constantly. I'm sure
      there's a lot more strain

SM   Sure. Have you felt that your voice was equal to the task?

TS   Yes, I think so. Although I say that but on Wednesdays I
      have to do five hours straight off and that, you know,
      Monday I did a couple of hours, I've quite often been asked
      to cover someone else on a Friday, but Wednesday was quite a
      heavy day and I think 'yes' by the end of Wednesday. I think
      starting, you know at the start of the day I'd be at the
      front of the class trying to address everyone and by the end
      of the day I'd sort of be more in the middle and getting
      them around me.

SM   So in fact it was probably feeling a bit strained? Right.

      Now you mentioned a couple of strategies there, but are
      there any strategies that you use to maintain your voice?
      You mentioned the water and getting them closer to you, but
      anything else?

TS   I mean, I think you know sometimes I've tended to do most of
      the talking and not sort of from, you know, from my own
      voice presentation, but I've kind of thought that I've
      needed to get the students to participate more rather than
      talking at them. So I've tried to incorporate more exercises
      for them to do. I've got the advanced group, about 8 of
      them, no it wasn't the advanced it was the intermediates
      there's about 6 in the year, and I asked them what they

TS   thought 'WTTC' stood for, which is 'The World Travel &
     Tourism Council' and actually one student said to me 'Why
     talks crap' (Laughter). Which you know sort of made
     me think 'maybe I'm talking too much here!'. You can find
     it out for yourself.   What...., I mean just taking more
     breathing and as I say trying to be talking from the stomach
     rather than high in my throat, because, as I was saying to
     you, after the first couple of weeks where I, you know,
     screamed my head off, and really shouted a couple of times
     at them, not so much for my voice, but just thought that
     this will do me no good here getting into this state.

SM   Were you aware that your voice was painful afterwards or
     anything? No, even though you were shouting it wasn't sore
     in anyway?

TS   I think so. Yes, I think you can sort it if you've been at
     the front of the class all out better than for at least an
     hour and a half, but as I found on Wednesday when you would
     tend to sort of

SM   Feel something?

TS   It's sort of rough really (Laughter)

SM   Is voice care seen as important by fellow staff members?

TS   Actually, I'm afraid it's something I haven't discussed with
     them. If I was a bit more on the ball I could have spoken to
     them last week to get a little bit of feedback. Two of our
     tutors do Amateur Dramatics. I think they would prefer to be
     actors than teachers and in class they were brilliant, you
     know when I did my observations, they were so entertaining
     and you could see they really enjoyed performing in front of
     a class. So I imagine that, uhm, they have done some sort of
     voice training like we have. They would sort of project
     themselves, but no it's not a subject.

SM   No, so nobody's sort of concerned about the fact that you
     are in an environment where the acoustics are difficult and
     think that's not of concern, particularly to people then
     obviously?

TS   No it hasn't really come up and I can't think of anybody,
     you know, or I can't think an instance where somebody's said
     'oh my throat's gone' or they're off with a sore throat or
     they're sort of things, you know I haven't seen them doing
     anything to help their voice in any way.

SM   Oh, lucky really. But, I mean again it's not unsurprising
     because very few places pay any attention to voice care at
     all.

TS   It was, you know, on our teacher training it was unless we had, you know, unless you chose the voice and the teacher ethic it wasn't spoken about at all. I really can't even remember that happening or Les saying anything like 'oh well you'll talk your voice sore'. I can't remember anything.

SM   A 'Voice in the Wildnerness' (Laughter).

      As you've become more comfortable in your professional role have you noticed any change in the way that you use your voice.

TS   Uhm, not really. I do, but I think I've always done this, I've always been quite, uhm, aware of my accent. It was something, a couple of years ago I was really thinking, you know, 'is it too late to go to elocution lessons'.

SM   Oh really?

TS   And at the start, yes I remember I did my micro teaching at   on Body Language and something came or something in the class with   I remember saying you know I'd like to work on my accent, you know, because I think it's. And he sort of said 'well you know it's fine, that's you really'. But it's, I've always thought a Birmingham accent was quite, sounds a little bit hick.

SM   Oh right.

TS   I've always thought that and I don't know I think even, you know, in this day and age I think people do tend to judge you by your accent and how you put your voice across, what your accent is. So it's, you know, that's something that I did think of and whenever I hear myself on a recording I just cringe, you know, and I think if I was conscious of it I would always try to speak a little bit lower.

SM   Right.

TS   I think, you know, there is always the danger of going sort of into a high pitched voice and going up at the end (demonstrates) as Brummies do.

SM   Right. Yes, so perhaps you've modified it over the years anyway? Right, but nobody, has anyone in the class talked about it at all? None of your students?

TS   One of the students tended to call me 'Brummie' in a generally playful way. But, uhm, no not really. I don't think so.

SM   Any particular comments about the term that I haven't directly asked about? Or anything that you've noticed or that you've been aware of that?

TS   Not really. I don't think so.

SM   Has it been as you imagined?

TS   The teaching? It's, no, (Laughter), not really. I mean one,
     just these few weeks at   ʳ have actually made me, uhm,
     I've worried a little bit that, you know, what would I do
     if I was in a class of really attentive bright students?
     Would T be up to that? You know because I think the danger
     at   is that the students are, I feel like a lot of
     the time it's crowd control and you just repeat things. You
     know you're given a, okay now somebody read me task one of
     this, now how you do. You can tell them three times, go over
     it three times and someone will yell out 'I don't know how
     you do that, how do you do that'. And you are just repeating
     yourself so much, uhm, and because you don't get many
     rewards of seeing students inspired or suddenly the penny
     drops, or you know, they are not enthusiastic, that I think
     it would be easy not to put so much into it. You know, in
     all honesty, you know, I don't plan the lessons how I used
     to, because I tend to plan and you only get a quarter of
     the way through. So I don't, you know, I think there is that
     danger that where the students are not particularly willing
     to learn you can sort of

SM   I suppose you get disillusioned as well.

TS   It's a bit disillusioning and that you know, and it has made
     me think 'gosh what you know if I was somewhere with bright
     enthusiastic students, you know would I, could I teach them
     quick enough, could I maintain that sort of authority?'.

SM   Probably in fact it would work because their very enthusiasm
     would spur you on, wouldn't it, because if you get the
     feedback that is so exhilarating and I'm sure you'd find
     that that wasn't a problem at all. It's probably in fact the
     reduction in response is making

TS   Slows you down.

SM   Makes one work more slowly, because you think 'well what's
     the point'.

TS   Absolutely. I'm taking a group to Greenwich tomorrow on a
     visit

SM   Oh are you?

TS   So we are looking at environmental impacts over there and I
     popped down to Greenwich yesterday to do a bit of a 'recce'
     before I take them. But you know a couple of weeks ago when
     we announced we were doing this visit they were really sort
     of 'do we have to?'. You know there'e no..

SM   It's a shame isn't it, when these things are laid on? It's just so unfortunate.

TS   But then I think, as you say, that is the reward if you get one student that seems interested or is pleased with a piece of work we've done. That's a reward in itself, but certainly not this term. (Laughter)

SM   Excellent, well thank you very much indeed.

APPENDIX 9

SM   now that you've completed another term what changes in your approach to the job can you identify?

CW   The first change is that I find that I'm having to, uhm, use a lot more, uhm, increase the volume of my voice, because the classes, because of the familiarity between the teacher and the students, discipline as so much as in general chit chat and, you know, talking between the students I'm having to use my voice a lot more and a lot louder, which I'm finding particularly with one or two groups is, particularly at the end, if I've had a full teaching day, I sound quite hoarse.

SM   Do you?

CW   Only slightly, but noticeably. So that's the main thing which I've seen since last time I saw you

SM   And what about in terms of your own feeling of I suppose professionalism if you like, any things that you've changed in admin or any?

CW   Not with regards to my voice. Other areas?

SM   Yes.

CW   Uhm, I seem to be fairly organised. I think what I find is I set myself deadlines which I know I can't meet, but then it gives me the flexibility. For example if I've got twenty pieces of work, which don't have to be in until two weeks time, I would say to myself 'right this week I will try to get those twenty pieces of work marked'. Which I know I'll never meet, but it means that come the weekend I might have got fifteen pieces marked, but it means the following week I've got the flexibility and I get the other five pieces of work marked in that spare time, because I've set myself such a strict deadline and I find that often works quite well so that's what I've been doing. If you understand me?

SM   Right. Yes. So that's a pressure you're imposing on yourself really?

CW   Yes, I set myself, you know, unreachable targets which I know I can't meet. That's only for me personally and then, as I say, I find that I tend to get a lot more done that as far as marking and lesson planning goes and then I've always got that luxury of, you know, an extra week or two when the actual proper deadline is to get the remainder done, you see?

SM   Yes, has it been very pressured this term?

CW   It has yet, because I'm solely in charge of GCSE media,
      which is quite a responsibility considering, I say, I've
      never done it before and it's 50% course work and each
      student has to produce four pieces of course work and I've
      got a class of about twenty students, so you're looking at
      what

SM   Eighty pieces of work?

CW   Yes, and the first pieces usually start coming in about the
      beginning of January and I'm just finishing off marking the
      last assignment. So between January and April I've got, you
      know, eighty pieces of work to mark. Plus the Examination
      Board stipulate that I fill in an A4 sheet of paper with
      notes on. So you've got eighty pieces and you've got, not
      only give them a mark but give notes and that. And also as
      well the syllabus, uhm, gives me the freedom of, they don't
      tell me what assignment I have to set, I can choose. Which
      is good in one way, but it puts more pressure on you. So,
      you know, I'm sort of like left in isolation with that, plus
      GCSE students are usually,in an FE college, quite uhm, they
      don't tend to have as much motivation perhaps as A Level
      students, because, you know, they've come from different
      backgrounds, they've failed GCSE's or been absent from
      school for a year or two, truancy, etc, etc, so it's quite a
      challenge.

SM   Yes. So are you doing A Level students as well?

CW   I'm teaching A Level, yes because A Level is *bread & butter*
      work for this college so I'm teaching them as well and I've
      also got some marking which goes with that, so.

SM   I remember my son did Media for A Level and he had some huge
      projects to hand in.

CW   Uhm, yes.

SM   Gosh that's incredible.

CW   And of course at the moment, you know, I'm in limbo because
      of the fact that the job I'm doing at the moment I'm
      employed on a sessional contract and a full time position
      will be coming up in September, but the chap who has taken
      over the Department has said 'apply for the job' but I don't
      think I've got his 100% backing. Whereas I have by other
      members of the staff and, I don't know, I'm a bit slightly
      narked about the way that he's operating. There's a few
      things which have come up, but I won't get on my soapbox
      (laughter) about that, but, uhm

SM   Right. Yes. So then that's difficult because

CW   Yes and it's irritating because of the fact that really I'm apply for the job that I'm already doing, plus no-one's criticised me in any way from any quarter about the way I've done the job. So I'm going to be rather piddled if I didn't get the job, because I think 'well hang on, I haven't been criticised while I've been doing the job, I've been good enough to do the job for eighteen months'. So you know I sort of like look at it as oh well you know I've just been filling a gap for you, you know, but I think that's the reality of Further Education I suppose, I don't know.

SM   Because that would be good, because actually it would give you that permanency.

CW   Uhm, that's right. Yes, I mean if it works out that I do get the job then it's going to be brilliant, you know, going from working at Greenwich, doing my teaching training, then doing a bit of part time work last year, then getting onto a sessional contract, then going from sessional to full time.

SM   Yes.

CW   Then you couldn't wish for it to get any better, but if it doesn't then I'm going to be a little bit stuck really.

SM   A bit stuck, yes.

CW   Because originally, when I was employed here, I was told, uhm, you know, 'do your work and then there'll be no problem. You know you'll be sessional for maybe a couple of years, you'll go to Point 5 and from Point 5 you'll go to Full Time'. But the lady, although she still works here, has relinquished her role as the Boss of the Media Department and this other chap has come along you see, so. I mean fortunately I've got her 100% backing, she's said 'well know I think you should get the job, because you know you've done it well'. It's just the uncertainty really I suppose of not knowing and, as I say, I feel the chap who is now in charge of Media is sitting on the fence, you know.

SM   It's really naughty, because he's obviously waiting for somebody else to come along and

CW   It's funny you should say that because the post was advertised in the TES. I know that, sort of like everything has to be seen to done properly interviews and that, but things don't always work out like that, but he actually got in touch with a friend of his from a previous college and said 'apply for this job', which I know there's nothing wrong in that, but it doesn't look good, does it?

SM   No, it gives you that feelin of

CW   Yes

SM   Of trying to, of cronyism

CW   Cronyism, yes, which I know I suppose if I got the job I suppose some people could say, you know, 'well that's cronyism'. But in a way, I don't know, it's not quite the same thing really. I mean I've proved myself really, but as I say. I mean I say he's given me a few patronising remarks, like 'oh well if you don't get the job the actual experience of the interview will be good for you. At least you'll know'

SM   Oh, gosh.

CW   You know, so

SM   So when is the interview?

CW   I don't know yet, I don't know. I mean I've got a couple of weeks off, where I'm back up in Yorkshire, so I hope it doesn't fall then because it's going to be a bit inconvenient. Of course I'll come down, but, so

SM   You don't want that.

CW   No, so I'll have to wait to see how things pan out.

SM   Right, oh well when we next meet you will know.

CW   I'll know which way, yes.

SM   Yes, yes.   Because when we last spoke I asked about major stress factors within the job. What would you now consider these to be?

CW   Stress factors. As far as I'm concerned I haven't got too much stress in relation to how I plan lessons, etc, but what I feel is that the people in charge, or the person in charge, I don't feel that there is enough leadership or there is enough organisation and that has a trickle down effect, because you know obviously, uhm for example projects will be set, I will be given a deadline, the students will then get that deadline and then it will be undermined, because I'll get another deadline, the deadline will be extended,

SM   Oh right.

CW   And it's all to do with poor organisation and that, and you know, as I say, it's not good for the students, because the students don't know where they are, it undermines my authority, you know, and respect, because they think 'well that deadline wasn't kept, so why should we keep this next one'. It's things like that. So I personally feel, you know, the stress isn't generated from my actions,

SM   It's external?

CW   It's external, yes, so, but it's not particularly too great, but it's, the less stress you have in this job the better.

CW   As I say, I think as I say, as you become more experienced,
     you know, you build up your knowledge and, uhm, resources
     and that and obviously your lessons become more finely
     tuned, especially if you're teaching the same sort of topic
     areas and that. So, as I say, it's just a few topic areas
     which I feel could have been either more finely tuned or
     better planned perhaps. But other than that, no nothing
     major.

SM   Yes, do you think you are your own worst critic?

CW   Uhm,

SM   Are you pretty critical of your own?

CW   No, not too much.

SM   Do you achieve a balance then?

CW   Yes, I always think 'well if you don't sing your praises,
     no-one else does'. (Laughter)

SM   Right

CW   I don't boast, but if people like give me credit and that, I
     usually sort of like agree with them, (laughter). So, I
     don't think I'm my worse critic, no.

SM   No, but I would imagine you're someone who wants things to
be done as well as possible.

CW   Well this is it, yes.

SM   And set yourself high standards.

CW   Yes, usually, hopefully.

SM   Yes. Well you mentioned a few of the vocal changes, but the
     next question really was 'What vocal changes did you note
     during the term?' and you explained at the beginning that
     you were certainly having to raise your voice more and that
     you were noticing by the end of the day that it wasn't. Can
     you describe that in a bit more detail?

CW   As I say it's like, uhm, if you've, uhm, I don't know
     whether this is a bit too graphical, if you've got a bit of
     phlegm at the back of your throat and the sound of your
     voice, I don't know, usually sounds a bit muffled or
     something. You know, or if your voice is a bit dry, I think
     maybe that is a better way to describe it, if you, you've
     been teaching for a good hour and you haven't had any
     liquids then, and particularly if you are teaching in an
     environment where it's quite warm and dry, your voice maybe
     becomes like that and it becomes a bit more husky and
     slightly deeper as well.

SM   Right and how long would that last, that feeling?

CW   Uhm, not, not too long, I mean say for example, uhm, if I've felt like that after the end of a lesson which finished about 5 o'clock, by about 6.30pm I should be okay.

SM   Right, have you been doing anything to try and help yourself?

CW   Well I always think that, I'm always conscious that I have to drink lots of fluids.

SM   Yes

CW   I mean I think it is recommended that you drink about eight litres of fluid a day, or something like that?

SM   Well maybe not even necessarily as much as that, but certainly

CW   Yes, no I think eight litres is probably a bit excessive

SM   I think that probably, you know, about a couple of litres is quite good.

CW   Yes, yes, but I always try to keep that in mind. As I say it's just catching time to get a drink really.

SM   Do you do any steaming at all, if it gets dry like that?

CW   Well I do like to go and relax and go for a sauna and go into the steam room, so I suppose that has the same desired effect?

SM   Yes, do you breathe in and out through your mouth for that?

CW   Uhm, yes

SM   Right.

CW   Yes, I mean I know I usually, it's common to breathe in through your nose, but yes I'm always conscious, you know.

SM   Yes, because you should if you are doing the steaming, do it in and out through your mouth.

CW   Because I think that has the same effect does it?

SM   Well it will certainly help, it will certainly moisten the vocal cords,

CW   That's right, yes.

SM   And also your breathing is very good so your breath support is good, certainly remembering from last year. But obviously it's just a bit of indicator if you are feeling that it's not as comfortable as it should be.

CW   It doesn't feel uncomfortable.

SM   It just, that the sound isn't as clear.

CW   That the sound isn't, yes. I mean actually I'm quite happy
     because I think I haven't got as deep a voice as I would
     prefer actually.

SM   Really?

CW   So I mean at the moment I think I sound slightly husky,
     slightly hoarse to maybe what I usually would sound if you
     caught me first thing in the morning.

SM   Right.

CW   Uhm, but that doesn't bother me.

SM   (Laughter) that's right.

CW   I'd be a bit deep and that I think it's good for the, you
     know, the discipline, the authority

SM   The authority, right.

CW   Particularly on a one to one basis with a student, as I say.

SM   Right, Have you had any periods of voice loss?

CW   No.

SM   No?

CW   No, I've never had voice loss fortunately, no.

SM   Right and among colleagues have you noticed any periods of
     voice loss or vocal change or anything?

CW   Uhm, not among colleagues, although I heard a lady who I sit
     next to in the staff room saying that a friend of hers, who
     works at   University or   FE College,
     had suddenly one day just lost his voice. And you know
     something like he tried to get early retirement due to
     obviously illness or whatever, because he'd lost his voice,
     you know, and unfortunately they wouldn't give him early
     retirement because that said it could come back at any
     minute, which is what his doctor had said or his specialist
     who he'd seen. And so I sort of like laughed and joked I
     said 'oh well is he quite a heavy drinker and smoker?' and
     she laughed along with me, so maybe that might have been the
     cause of it. I think it's come back in some form, but not
     totally. So other than that, as I say, I mean there are
     people in the staff room who I suppose don't take care of
     their voices maybe not as they should do, I think they take
     it for granted.

SM   Yes, one of the questions last term was really this thing
     about whether there was any programme in place for voice
     care and development and I remember you said there wasn't

CW   Uhm

SM   but I was asking people this question simply because as you
     get to know people sometimes they'll disclose more, because
     they think teachers are always concerned to say anything
     about their voice in case people see them as being
     vulnerable and you know   if there's a question of early
     retirement or something very often they'll say 'oh so and
     so's voice is a problem', so that might be.

CW   Certainly a few people who have had, you know, 'flu; and
     that, who've you know. I don't think anyone has lost their
     voice totally, but you know has nearly been there. There's
     one or two. Not that I know of personally, but within the
     English Department and that, so

SM   You were talking about   and there are at the
     moment in Poole there are some teachers who have been issued
     with radio mics.

CW   Oh right.

SM   What would you think of this as an idea?

CW   Well I think that's quite common in universities when
     lectures are being given, because obviously I know my
     university, uhm, a lecture would be given to 90 to 120
     students and maybe would last for an hour or two. They
     delivered through a microphone in a big hall and then
     afterwards they would split up into small seminar groups.
     Uhm, so in that context yes, I mean I think it's suitable
     but I don't know if it would work very well in a small
     classroom. I mean obviously things like the acoustics. I
     think it might create more problems than it would solve
     actually.

SM   That's interesting, a few people have said that. Can you
     expand upon that a bit?

CW   Well, I mean I think, you know, you get students who try to
     compete with you, and, uhm, you know they try to like take
     you on and try to make more noise or, you know, and shout
     more. And then you'd have other technical problems, you
     know, the microphone might not be working, which would
     interrupt the flow of your lesson and things like that. And
     that would be a cue for them to start talking while you are
     messing about with the volume or something, or the battery
     might go flat. I don't know, I'm not too keen on that, but
     if it works, if it can be shown to work I might really go
     for it, but I wouldn't like to be a guinea pig and try it
     out.

SM   Right, but it initially was put in place because they were
     conscious that a number of students who didn't hear
     everything that was being said in different acoustics. But
     there are only five schools in the UK, so it's very much a
     pilot project.

CW   Oh right.

SM   But I thought it was interesting because of the connection
      with the voice and that , so I wondered, but again, as you
      have said, a number of people have said that they thought it
      would alter the dynamics of the teacher/student role, if you
      had this.

SM   Has the job measured up to your expectations?

CW   Uhm, yes, I would say on the whole it has, yes. I couldn't
      have been too disappointed with it. Yes, I would say on the
      whole it has.

SM   Anythings that you feel have been better than expected?

CW   Uhm, I suppose the students actually. I thought that I'd
      have a lot more, uhm, external problems, you know maybe
      students coming in drunk or students having problems at
      home,   family   problems   and   that.   I   just   expected,
      particularly with us being a college, I know we are in the
      suburbs, well in Kent really, obviously there is quite a lot
      of students I've found who come from Inner London, and you
      know you just sort of like had this idea that you're going
      to get a lot of problem kids and that. Particularly as you
      know GCSE Course, but also the A Level courses as well, that
      some students have decided to come to a college because
      they'd had problems at a school and found the school
      environment hasn't been conducive to an education, so
      they've thought 'well I'd rather be in an FE college',
      because it's a more mature environment for a student, it's
      more, uhm, so yes I thought there'd be more problems with
      the students and there hasn't been.

SM   Well I'd imagine that if there were going to be problems,
      you would undoubtedly identify those earlier on.

CW   Uhm, that's right. Yes.

SM   If you had a *wish list* what would you wish for the
      profession?

CW   I think, uhm, I think really more pay actually. I know it
      sounds a bit clichéd, but I found that, although if you were
      to talk to, I don't know, people down the pub, who work in
      supermarkets and that, you'd say how much you get paid an
      hour it does seem quite a lot in comparison to working at
      Sainsburys on the till, where you get maybe £3 or £4 an
      hour, you know. But then when you take into account, I mean
      I'm talking from my experiences as a sessional lecturer, all
      the extra hours you have to put in, that you don't get paid
      for, if you put them into the pot then actually your hourly
      rate might not be more than they're getting at Sainsburys.

SM   Right. Yes.

CW You see? So that's maybe one thing. I mean particularly in relation to sessional staff, because actually you find maybe you get more commitment and loyalty out of sessional staff because they've got something more to prove. Because particularly full time staff I think in FE establishments once you're there, unless you commit

SM Murder?

CW murder or something, you can't really get them out, you know. They can be really some of the worst teachers in the profession, but unless they, you know, and, you know, as I say, the sessional staff have a lot more to prove and they do put in a lot of hard work and effort which sometimes isn't always recognised I think. So, that's the thing that springs to mind, but then I suppose the other side of the coin is not only more money for the teachers but you know for the actual courses themselves, you know, in my particular case Media Studies there is always, you know, areas we could spend more money on.

SM Is that in terms of resources or giving opportunities and so on?

CW Uhm, yes, I mean resources. I mean just in terms for example our video library, you know I mean about £300-£400 would be sufficient to get a pretty good, you know, video resource library. Maybe the same again for some good text goods, which could then be used and photocopied, you know, and then of course there is more expensive things, like more, uhm, video cameras and that which are obviously more expensive items. So I think that's what could be done, because what you find is, like for example our department where all the equipment is very old and the view is that if it is still working and you can make do and mend so much the better.

SM Right. Yes that's I think, a number of people have said that there's been an anxiety about the salaries, because always at the back of the mind is this thought about, well really how are you going to make ends meet. I mean for a number of people that I've spoken to the salary is actually very critical, because also I think a number of the other people that I've been talking to are like you, they're not on permanent contracts, they're going round picking up hours from a range of different colleges.

CW Well fortunately that wasn't the case with me,

SM You were lucky weren't you?

CW because I was given a year's contract and so I was given enough hours, you know, which as I say, I mean I would like a full time position in September, because if I was kept on as a sessional staff with the same number of hours that would be fine for me. I could cope on that, the money is no particular problem, it's just the fact that those extra things which you have to do.

SM   that would be funded for.

CW   Yes, which I didn't realise at the time, you know, the extra work which you have to put in, uhm, you know isn't paid for, you see?

SM   Yes. No, this is very common. I mean for those people. Sorry what I meant when I said that was people who were working, I think there is only one person working full course, not even full time, but at a college and a lot of others are just picking up hours in sort of four or five different colleges.

CW   Yes this is it.

SM   And then there's actually really no security in that because they're not sure where the next year and each term it seems to be different.

CW   I mean I'm glad I'm not in that sort of situation working at four or five colleges, because I mean you know the fact is that one college might think 'well will they maybe leave us and go to some other college?', you know. You never really know where you are do you?

SM   I think the thing is that they can't make, they don't seem to be able to make any sort of relationships with colleagues because they just are in and out, you know, they don't get to know people.

CW   That's right, yes, they're not a permanent fixture are they?

SM   That's right, that's right, so that's difficult.   Anyway thank you very much for that. That's excellent.

APPENDIX 10

SM   when you reflect on this first year post qualification, what have been the most significant professional issues for you?

HP   Not having a really good relationship with the Head teacher and that really has caused me all sort of, uhm, problems.

SM   Right.

HP   I just question really why she dislikes me so much. I can't understand what I did to make her behave the way she has. Uhm, and really I think everything has been based around that relationship.

SM   Right.

HP   I think life could have been a lot better had she not shown me so much anomosity.

SM   Right.

HP   It really is, I think, the crux of it.

SM   That's the over riding consideration. Do you now feel secure in your professional identity?

HP   No, not really because what's happened is that my confidence has been knocked for six really because of the way I've been treated and my own self confidence within teaching is not what it should be really. So, no.

SM   Could your training have better prepared you in any way and if so how?

HP   I don't think the training could possibly make you realise how much extra work, even with the teaching practice, you're still expected to do so much more within the classroom, just you wouldn't, you couldn't contemplate, uhm, it's writing reports, the pressure. I counted up that it actually took me 96 hours to write these reports and word process them.

SM   Oh my goodness!

HP   We were given half a day to do these reports and I ended up staying up two nights to do them because it was the only time I could get the peace and quiet I needed to actually write them. And, nothing prepared me for things like that,

SM   No.

HP   You know the amount of marking for a Year 5 class is quite horrendous and that's on top of planning and everything else that you have to do. And of course with the new Literacy Hour this year that's just put extra pressure on. Sometimes six hours sometimes doing the planning over the weekend including Maths, Science and Literacy Hour. You know it just takes such chunks out of your time.

SM   Yes. Yes.

HP   So no I don't think they could possibly have prepared you for that and you can understand why so many people are actually lecturers now! (Laughter).

SM   Yes. Yes. (Laughter) What were the most and least useful aspects of the course?

HP   Probably all the, I mean we did lots of the History in Education, how different peoples' ideas of education and really we probably could've done without that to be quite honest. Well occasionally it helps you to reflect and think 'oh yes we've cracked that', but you know that really wasn't terribly useful. But I think what would've been useful, we did some on children with special needs and that sort of thing, but I think we could have done with lots more on that and certainly with the English, the course really didn't relate to the new Literacy strategy at all. What we did was of very little help.

SM   Really?

HP   Yes, on reflection we needed so much more help with that. It wasn't so bad with the Maths, but certainly with Literacy because you're also expected to put word levels in, where you're looking at phonics, though we didn't do anything on phonics within our training. Grammar, all the grammar that you're expected to know now in the strategy we did nothing of that at all.

SM   Right.

HP   So really quite frankly the English was probably the least useful.

SM   Now it has been said that voice is the teacher's most important professional tool, would you agree with this or do you feel your voice has been of limited importance overall?

HP   Oh no it's definitely the most important tool because that's how you talk to the children, you encourage the children, you tell the children off. So obviously it must be the important tool.

SM   So how effective was the voice care training in preparing you for the vocal demands of teaching? And you can be as rude as you like!

HP No, I mean I had problems with the breathing issue anyway in your classes. I mean because I'm asthmatic, I've never breathed very well and obviously that really didn't help me as such. But, uhm, some of the things you said about protecting your voice and looking after your voice and certainly the steaming and that sort of thing was very very useful. I did use steaming an awful lot.

SM Did you?

HP I made sure that I drank plenty and if the air quality was poor then I used to make sure I did something about it. So from that respect it put me, it gave me ideas I hadn't really thought of at the time. So in that respect it was very good. I think actually when I do raise my voice, I do tend to try a bit more and make it deeper, if I've got to raise my voice. Otherwise my voice would go first, it was a high pitched shriek, so from that respect. But certainly I use other tools to make the children aware that I want their attention.

SM Yes.

HP So, but, when you reflect I have done numerous things that you've suggested so

SM Oh well I mean that's at least if it was used in parts then that's good.

SM You've mentioned a couple of environmental there arnd environmental factors are implicated in vocal disorders, which have you been particularly aware of?

HP My biggest problem is the chalk board really and I used to damp down the board when it got really bad and all dusty and I used to find that quite unpleasant at times because it just goes everywhere. And obviously if it's going everywhere it's going in your mouth as well.

SM Yes.

HP Uhm, but I've lost it!

SM No, don't worry the Environmental Factors?

HP Yes that's right. Uhm it's quite lucky really that the classroom isn't too bad and during this hot weather we've had a (can't decipher tape)   so we've been quite lucky we can use both sides of the classroom so that wasn't too bad and I think the ceiling was a reasonable height.

SM Oh right.

HP It would've been nice to have had carpet on the floor because that does deaden the noise an awful lot.

SM Yes

HP   But nothing is really terrible in the classroom as regards that except the chalk dust.

SM   Yes. Right.How many sessions per week have you spent teaching?

HP   All of them.

SM   All of them? So you haven't had any time free at all?   .

HP   Very, very little.

SM   Right.

HP   So in practice the lot.

SM   Really? And this was all whole class teaching was it?

HP   Virtually, Yes.

SM   Right. When you say 'virtually' was there any periods when you had your little groups.

HP   Well one last week (Laughter) and I thoroughly enjoyed it, my Year 4's. No it was virtually all whole class teaching. I mean I work with groups within the Literacy Hour and Numeracy Hour, but I still had to raise my voice to remind the rest of the class at times, not always, that they should be on task and quiet.

SM   Right.

HP   So when I was working within my groups on a daily basis, I should think in theory I wasn't raising my voice but the rest of it virtually, uhm, certain elements where I would go and work with children but I used my voice a fair amount of each day.

SM   So how much of each session were you talking?

HP   Probably a third.

SM   A third of each sessesion?

HP   Hmm.

SM   Right and was this, you mentioned that you were raising your voice, generally at high volume or at a lower volume?

HP   It tended to be a higher volume, but in the end I wouldn't raise my voice over a certain level, I used to bang the board rubber to get their attention and then I didn't have to shout. Because I found in the end that I can't raise my voice that loud and I wasn't prepared to make my throat hurt.

SM   Because you had quite a lot of Special Needs in your class didn't you?

HP   Yes

SM   Which would make it more difficult as well, not just in terms of behaviour.

HP   Towards the end I actually sort of got them under control.

SM   Right.

HP   Certainly this last term has been a lot easier with regard to the behaviour issues and I mean all this stressfulness before.

SM   Oh right.

HP   So I've actually, that was one comment that was made to me was that I actually seemed to have come to grips with the lower ability children well. So from that respect I was quite pleased.

SM   A success?

HP   Hmm.

SM   Well in the past, this sort of leads on, we discussed major stress factors such as pressure of work, limited support, too much paper work. Would you now view them in a different light in terms of being reflected on your work?

HP   No, not really. The major stress factors do make my throat hurt, there's no doubt about that

SM   Yes.

HP   Purely I think, I think that the kids cotton on really quickly if you're under stress, which makes them play you up more and consequently you really have to compensate for it by responding to them more. So consequently you're raising your voice, or I certainly raise my voice as a way of sort of saying 'Now look you've got to stop' instead of approaching in from different avenues and that's one area where I think I need to think of other ways or other options to actually manage misbehaviour..

SM   Right

HP   I wouldn't say it was dire, but that's my way if a child starts answering me back then I tend to raise my voice, instead of keeping it at that level.

SM   Yes, well I mean you're only human for goodness sake,

HP   Yes, but you know it's more than obvious to me that it doesn't work by raising your voice

SM   Yes.

HP   now having done it a year, I know that there's got to, you must try and keep much more on the level so that you don't child that you're having the argument with, for want of a better description, that you're actually rattled by them. So that in itself would save your voice.

SM   Yes. So what coping strategies have you used to deal with these stress factors? I suppose on a professional level and a personal level.

HP   Well, as I mentioned, I take the Park Farm remedies which do help me. Sitting quietly on some occasions, like just going and sitting in the car and finding a bit of space. Do you know what I mean?

SM   Yes.

HP   Just for me to be on my own, me, because the bedroom doesn't seem to work because I still got disturbed up there. But if I go and sit in the car they don't know where I am.

SM   Right (Laughter)

HP   It's dreadful isn't it? I need a shed at the bottom of the garden. Anyway so that's one way of dealing with the stress and certainly I mean with some things I used to go and bounce it off other people in school. If I felt stressed about something I would actually find mentors, for want of a better description, that I could just sort things through with them and whether they agreed with me or whether they just listened and sort of helped me talk through it myself, that in itself was very very useful. I made a couple of good friends there, which maybe was good for me because of that you know?

SM   Yes.

HP   And equally so they use me in the same way. So you know it's nice to be able to have someone you can go to and just get it off your chest, because as much as   put up with it all he really doesn't need that when he's spent the day at work. He doesn't need me coming home and having this, especially with   being the way he's been, he's had to deal with that. So I've been much better at discharging before I come home really.

SM   Yes, that's right and I think that's a very good strategy because it allows people to reflect as well and once you've analysed it, often it becomes clearer doesn't it?

HP   That's right.

SM   I mean you say something instead of it building up inside, you know it seems just by speaking it it seems to change it.

HP That's right.

SM How much have you changed and developed personally over the past year?

HP Uhm, I'm not so easy to walk over as I was. I usually sort of step back, not all the time, but then I do take time to think 'right is it worth getting aggravated about?'. Something that I didn't used to do before sort of weight up whether it's worth bothering with it. Is it, how important is it really? Do you know what I mean?

SM Yes.

HP I mean certainly with the Head Teacher there's a couple of times where I really would have liked to have followed her and made an issue of it and then I'd turn round and think 'what is the point?', you know? It's only going to make my life more difficult and is it really going to matter much ultimately, you know, and doing that has actually made me less stressed.

SM Really?

HP Yes, I've sort of thought 'no what's the point, why worry about that? You've got much more important things to worry about, It's putting your priorities I suppose really and what you really care about into perspective. Liked I cared very much what I did with the children, but then I found, I honestly feel, that the Head Teacher used to try and wind me up and you know so, but I used to tell her exactly if she sort of said 'later where's this?' I'd say 'Sorry I haven't had time to do that, I spent so and so time doing something else for school'.

SM Right.

HP You know, I used to say what I'd done more of before I was got at, you know, but in the end, when I thought it was appropriate and I think that was it, you know? So from that respect I'm trying to prioritise much more now and I do tend to and then that's one of the reason why I decided that I'd come out and try and find a part time job because my priorities have changed. My priority has got to be my family ultimately, although over this last year you wouldn't have thought that was my priority and I've learned that this year that my family are much more important than the job.

SM Yes.

HP I can always get another job.

SM Well that's right.

HP You can't always have another partner can you?

SM   No. So I mean that's really been a huge change hasn't it?

HP   It has absolutely.

SM   How much has the political climate within teaching compromised the *teaching* role?

HP   I think they've compromised it totally, they just do not realise what they are doing to the teaching profession. They're loading it on to teachers. It's getting to the stage where it's verging on the ridiculous and with the Numeracy strategy coming in in September, they're just adding already to those pressures and the pressures. This advanced teachers, fast tracking teachers there's an issue there. I mean I don't really think it will enter into the way of thinking in school, because I don't think anyone there, the one person that might have been able to go for it is moving on anyway. So it's not devisive in that and my feeling is the evaluation is useful, everybody should be evaluated on a regular basis anyway. So there's no great, I've been evaluated in other jobs so I don't take that lightly it's something that, I think it's right that it should be done because if teachers aren't performing, not necessarily picked out and say 'You're a bad teacher!', but give them support to make them better. If that's the way to do it then I don't disagree with it, but they're just trying to heap too much on. I mean they're heaping too much on the Head Teachers as well, so much with the SATS results. SATS results, SATS results that all you hear and you end up 'the Head Teacher doesn't think this' and this puts pressures on, pressures that they don't really need. And it works it's way down and perhaps that's one of the reasons why the Head Teacher is the way she is, you know? But I think they're just asking too much of teachers and Head Teachers full stop.

SM   Right. Yes.

HP   So I think something's got to break eventually. I mean do they get the message when so many people leave the profession again. I don't know I haven't seen the statistics. It would be interesting to see in a couple of years' time how many more people have left the teaching profession.

SM   Yes.

HP   Because at this moment in time I'm really in two minds whether to stay.

SM   Really?

HP   Yes. So it's that sort of pressure as well.

SM   Is this something that you see in school? Are there a lot of people in your school who feel the same?

HP   Well I know one of the young girls she's only been, this is her second year in full time teaching, and like she's leaving at Christmas, she's going off to India.

SM   Right

HP   And she's said she's not coming back into teaching after. She's going to do supply teaching because she wants to go round the world and when she comes back she's actually a trained gym instructor as well, she's going to set up an after school gym club and go around the different schools doing that. She's got no intention of going back into teaching and that's a young person of 26, you know?

SM   Yes.

HP   So, yes, the pressures are there, I mean what sort of life have they got. I mean you shouldn't ask people of that age to be constantly planning and marking and everything else, you know it's just all too much. If it can't be fitted into the day then what should they be doing? Employing more teachers and not asking them to do it al. You know it's not right.

SM   What would you do differently if you were starting this year again?

HP   I wouldn't accept the job there. (Laughter) I should've done my homework really, because it's interesting what you find out with hindsight, but that would certainly have been part of it. I mean I was interviewed in the afternoon, she phoned me up the night before, virtually interviewed me on the phone, asked me for an interview the next day, put me through hell for over an hour and a quarter. I walked out and thought 'No, I don't want that post'. Within an hour of me getting home, she phoned me up and offered me it and I should've realised and perhaps I should've looked into it more, but then I'd made my commitment. She asked me on the phone there and then and I didn't say 'No, I'll think about it', because I was starting to panic that I hadn't got a job.

SM   Yes.

HP   Which in reflection was mad. I shouldn't have done. Now if I'd have found somewhere else the situation would have been totally different. So really I just made the wrong decision at the beginning.

SM   Right. What specific changes in your voice quality have you noticed during the year?

HP   It's quite, I don't know it sounds throaty at times. I mentioned to you I'd had this twinning effect at one time, well that actually went away and I don't have a problem with that any more. But it is quite hoarse, in comparison with what it used to be so that's possibly the difference.

SM   Making comparisons with your former career, can you identify the pluses and minuses of your new career?

HP   The pluses are I enjoy working with children and I do enjoy the work, whereas in an office it doesn't have the same stimulation. I mean every day is different at school. Everyday you'll find different problems, different things to enjoy.

SM   Yes.

HP   You see the children progress and things like that. I mean that's got to be a plus against anything else I've said before.

SM   Will you be in teaching in two years' time?

HP   Yes but not in the main stream. I'll be going more for Special Needs and when I say Special Needs I mean severe learning difficulties.

SM   Right

HP   Not in main stream teaching.

SM   And that would mean that you'd go in and just work within a district or you could find

HP   No I could find a school. There's quite a few schools around I have an inkling that that would be an avenue that I would want to take before I actually qualified and I'm just thinking more and more the fact that I did so well with my Special Needs children that perhaps that's the avenue I want to take.

SM   Yes.

HP   And I might as well do what I want to do.

SM   Yes.

HP   So but it's a matter of me finding the right school, because they don't normally ask for any additional qualifications or anything like that. So they're quite happy to take from the main stream. So, you know, and getting myself straight and my children sorted out first before I even think of it.

' SM   ·   thank you very much.

SM   ﾀ   when you reflect on this first year post qualification, what have been the most significant professional issues for you?

LW   Uhm, making sure you talk to other people about any problems you have, keeping the classroom tidy, good control of the children and thinking about different ways you can get across issues to the children.

SM   Do you now feel secure in your professional identity?

LW   No. Not after this year, no.

SM   No. Could your training have better prepared you in any way, if so how?

LW   Uhm, I think probably it could. There were lots of things, we talked about very little about the professional side of it really you know. A little bit about how to teach the children, but not much, they went more into educational issues and things like that and I don't think they really prepared you

SM   For the classroom?

LW   For the classroom properly. No.

SM   What were the most and least useful aspects of your training?

LW   The most useful aspects were those where we actually went through different things in the classroom, how the classroom should be set up and one or two subjects we were actually taught and given an idea about how to teach subjects.

SM   Right.

LW   And the least useful aspects really were in IT and various subjects where we were just given sheets of paper to read through

SM   Oh right.

LW   and interpret and that was it.

SM   Oh right. Yes. No, I mean there's a great emphasis on the practical aspects in terms of people I've talked to that they thought that was something they wanted more of.

LW   Oh there was very little practical, it was very poor I thought

SM   Yes, that's similar to the people I've talked to.

SM   It's been said that voice is the teacher's most important professional tool, would you agree with this or do you feel your voice has been of limited importance overall?

LW   No, I think it is very important, uhm, although I'm talking quietly now, I don't talk like this in the class. I can project my voice, too loudly at times, as people have found out. But it is the way you say things, it's not just how you project your voice.

SM   Yes,

LW   If you come in (unclear remark) it's not going to get a very good response from the children, you've got to show them that you're in command. But also vary your voice from time to time.

SM   To add interest?

LW   To add interest and it's the way you say things, you know, it's not like 'would you mind picking things up?' you know very politely, you've got to say it as though you mean what you say.

SM   Right. Now you can be as rude as you like, but how effective was the voice care training in preparing you for the vocal demands of teaching?

LW   I think it was effective, I kept bits and looked through from time to time. I must admit lots of things I thought afterwards 'oh dear I wish I had read that through again, that would have helped me'. But various different things like the different ways of raising and lowering your voice, the different ways of saying things to get different responses from children without shouting.

SM   Right.

LW   I found that useful and also the tip and I always carry some water with me.

SM   Oh yes, oh good, yes, excellent. Environmental factors are implicated in vocal disorders, which have you been particularly aware of?

LW   Uhm, hot, dry, dusty, areas, you know, I found in some ways, even though it's been very hot this last term, that in the winter the central heating that's worse on the voice..

SM   Right.

LW   I have had quite a few sore throats and one or two colds, which I haven't had for yonks

SM   Yes.

LW   just this last term, but that has been the main thing. Yes.

SM   Right.

LW   The actual dry, dustiness, I start choking. That's gone that choking. Choking and coughing.

SM   Yes. No that's a very good point. I've heard that. Now, how many sessions per week have you spent teaching? If we reflect the first term was full time, and the second term was up to half term as far as I remember and then there was a break and then you've been doing supply since Easter.

LW   Just after Easter. The supply it's difficult to say. Before that I would say I was teaching, particularly in like the Literacy and Numeracy hours a good part of the time. Other sessions there's a lot of teaching at the beginning to get them into it.

SM   Right.

LW   Uhm, but in supply it's a little bit different, because often it's just, even though you're there doing what you are told to do, you're sort of more or less following what somebody else wants you to do.

SM   Right.

LW   So you don't feel you're teaching in the same way, but I suppose a good half a day each day would be spent, if not more, teaching by the time you go through. A lot of it is follow up work, children finding out themselves but, with a lot of young children once you do that initial part they look at you as though you're, you know, on another planet. I think they do most of the time in any case (Laughter).

SM   So really in fact this last term, since we last met, how many days per week overall would you have been in school?

LW   Some weeks it's three days, some weeks four days, some weeks I haven't been there at all.

SM   Right.

LW   Uhm, because the days they've offered me, as I say, I was looking for other things and I couldn't do those particular days. So it's mostly been, I haven't been in full week at all.

SM   No, but it might have averaged over, because it was a ten week term this one wasn't it?

LW   Yes, I've filled in sheets for eight weeks, so two weeks I wasn't in. One week I wasn't well, I went down with a very bad cold and I 'phoned in to say I couldn't do the days they'd offered me because of the cold. I could hardly speak, so I didn't think it was worth trying it. And the, uhm,

SM   And then there's another week when you came back from holiday, was that the week?

LW   I did one day.

SM   Right, oh you did one day that week?

LW   But there was another week, I was looking through and I noticed that I didn't do anything, uhm, whether it was just one of those very quiet weeks, oh the last week of term.

SM   Right

LW   There was nothing at all, it was very slack then.

SM   No because nobody, Oh yes, oh well so that's quite a lot. Was this mainly whole class teaching, small group work, presentations or a mixture of all these?

LW   I would say the majority was whole class teaching.

SM   Right.

LW   Uhm, Introducing, teaching the class and then working with a group. But a lot of it was whole class teaching. Yes.

SM   And then you said that for each session you were probably talking about half of that time in terms of the instructing.

LW   Yes, the introduction, I mean to say the Literacy Hour was sort of done through two different sessions. You know, ten minutes, fifteen minutes, and then twenty minutes on the carpet before they move. Then you're working with a group, with group reading and other things, then you're back in the plenary. So your whole hour, you're virtually speaking or talking to children. Maths is fairly similar, but not quite so bad, because they are doing the work, but if you're working with a group, again you're

SM   Yes.

LW   Lessons that are not so much like that are things like Art. Of course PE you're talking the whole time, and you're talking at a rather large volume the whole time.

SM   Yes.

LW   Uhm, but some of the sessions are not quite as strenuous, but I did find, doing the supply, that sometimes I was with the Year 6 and I had to sort of just do the register and say Right, this is the work you've got to carry on with'

SM   Right.

LW   and it was because they were just doing like follow up work and it was only one session. I just did Year 6 and then straight off to Reception that day. I've even done Nursery.

SM   Really, how incredible! Now was this generally, you were saying some of it was obviously if you're doing PE and things it's higher volume, but was it generally at a higher volume or lower volume?

LW   Mostly at a higher volume.

SM   Right,

LW   If you lower your voice too much you lose some children to start with. You tend to have children with hearing problems at the front or eye sight problems. I had one boy with very poor sight in one class, but I do tend to try and vary it. You tend to come in fairly loud to get their attention and make it loud as you can, but other times when I want them to come in from the playground quietly, you try and speak very quietly to calm them down. But I suppose the majority of it would be at higher volume, yes.

SM   Now in the past we've discussed major stress factors such as pressure of work, limited support, too much paper work. Would you now view them in a different light?

LW   No.

SM   No?

LW   If, uhm, supply teaching you don't have a lot, but with main stream teaching, yes the whole way through it.   It is stress.

SM   Stress?

LW   Stress from start to finish.

SM   Right. What coping strategies have you used to deal with these stress factors?

LW   Uhm, I've tried to sort of think about what's the most important thing to get done.

SM   Right.

LW   Uhm, get that cleared out of the way. I've tried to do a lot of marking, that's sounds awful, but marking through your break time, through lunchtime. Uhm, very often lunchtime is ten minutes just to try and eat a sandwich if you've got time. Mark and doing as much as you can in school and I tended to go in at about 7.30am when I was teaching just so that you could get some work up on the wall, the work mounted because there was no time, you weren't given time in the day because you were teaching from the moment you got in to the moment you finished. There was just no free time at all.

SM   So all you were really trying to do was just reduce some of the time that you had to bring work home with you. Is that

LW   Yes, because, uhm you know, carting a lot of stuff home, it's bad enough working and getting everything ready for the next day so that you could sometimes get to bed before about 11.30pm or so.

SM   Did you have a chance to talk to colleagues and friends? Did you use that as a sort of sounding board?

LW   Oh we did. Yes I did at the school I was in. There were a few people there that you know you used to go and say 'help!' that sort of thing. But a lot of the time so many people are so busy themselves that

SM   They don't want to

LW   You do talk, but talk while they're working.

SM   How have you changed and developed personally over the past year?

LW   I think I've changed from the point of view that I'm now a bit more laid back than I was at the beginning of the year.

SM   Right.

LW   And I sort of think well what's the most important, knocking myself and getting to a state where you're, you know, going to be ill or taking a step back and thinking well 'what am I going to do in future' because the pressure has been ridiculous. So I'm not, whereas at the beginning of the year my priority was I've got to get through a full year's teaching then carry on with full time teaching, now my priority is for perhaps a couple of days, two or three days teaching might be enough.

SM   Yes, but maintain your health?

LW   Yes.

SM   Yes, because that was I know quite critical. Yes. How much has the political climate within teaching compromised the *teaching* role?

LW   By that do you mean all the different things the Government are pushing?

SM   Yes.

LW   Yes, an awful lot. You are now really pushing information on children at a high rate, rather than spending your time teaching children. I don't feel you're teaching so much, uhm, as you were. Uhm, the Government singled out the Literacy Hour particularly where you've got to get all these things done in a week and the children can't absorb them and you're just throwing things at the children all the time

SM   Hmm.

LW   and they're just as muddled. Whereas you take one of those tiny concepts and spend a whole week until you're happy that the children have grasped it

SM   Right.

LW   and then go onto the next one. But I mean to say in one lesson eight year olds, past and present verbs, powerful verbs the next day, imperative verbs you know, some children just can't understand a verb properly.

SM   No.

LW   And I can remember one particular week, it was the week we had OFSTED in, we had to do similes, metaphors and illiteration for eight year old children in one week,

SM   Oh my goodness!

LW   based on poetry. I think they're sort of gathered a little bit about one of them, but not really any of them at all and you sort of think well this is ridiculous and actually OFTSED said so as well.

SM   Did they?

LW   They thought it was far too high powered for children of that age.

SM   What would you do differently if you were starting this year again?

LW   Right, I would have probably I think in retrospect have done the whole year supply.

SM   Would you start with the supply rather than

LW   Start with the supply and then think seriously about what I was doing. I was talking to a friend who did that, decided because her son was in a nursery at primary school, that, even though the other boys were older, she would do a year's supply and she's decided that she's not going into main stream she's going to stay with supply

SM   Oh really.

LW   She doesn't think she would cope with any more and I think she's probably done the right thing.

SM   Right. Yes. What specific changes, because you've always been so good about sending me all the detail, but what specific changes in your voice quality have you noticed during the year?

LW   Uhm, probably the main thing is, well I've always coughed a lot, one thing I've noticed is I can start saying things and the words don't come out.

SM   Right.

LW   And I have got quite husky and, you know, it's almost as
      though the voice is forced and you're not speaking at a loud
      volume and expect it to happen. And over the days that's
      happened quite a few times.

SM   Right. Yes.

LW   So it's sort of cracked up, but

SM   Which is not a good sign is it really?

LW   No.

SM   Making comparisons with your former career, can you identify
      the pluses and minuses of your new career?

LW   Uhm, well I suppose the pluses are if everything went well
      you could have job satisfaction out of it, especially when
      you see children developing, but the minuses are that you
      haven't got the time to get job satisfaction out of it now.
      There's so much stress you find it very hard. It's long
      hours, very stressful, uhm, and it's not just, it doesn't
      just stop like another job. A lot of jobs I've done before,
      even when I was working in the hospital, stopped there and
      you came home.

SM   Right.

LW   Uhm, this hasn't, you bring the work home, you're working
      through the evening, it affects the family. No, I'm sorry I
      can't do this this weekend because I've got to get all this
      prepared for Monday and this sort thing and you know, now
      particularly with a few other things

SM   Yes. You don't want that at all.

LW   No.

SM   Will you be in teaching in two years' time?

LW   I don't know. I've thought of various different things
      actually.

SM   Right.

LW   I've got a few things in mind. If I am it will probably be
      either supply or job share. I doubt it would be full time
      unless the political climate changed tremendously.

SM   Right

LW   But that I can't answer at the moment, honestly.

SM   No.

;M   when you reflect on this first year post qualification, what have been the most significant professional issues for you?

T   Dealing with other members of staff.

;M   Right.

T   Staff politics and getting ways of doing things that have been done for years and if it's changed they don't like it and you don't know how to do it in the first place, so you don't get a lot of help.

M   Right. So that's part of this whole interaction with other staff members?

T   Hmm.

M   And I remember that you said that some of them had been there quite some time which would be difficult. Do you now feel secure in your professional identity?

T   Yes, I do feel more of a teacher especially now that we've got two NQT's in the school and I've been showing them where things are and how to do things and saying 'oh don't worry, you know, it won't be that bad!'.

M   Right. Right.

T   I feel quite grown up! I'm a proper teacher!

M   Ah, excellent. Could your training have better prepared you in any way, if so how?

T   We could have definitely have done more on dealing with staff, because although I've had quite an awkward situation in school, a lot of my friends have still had problems diddling with staff and, you know, fitting in, being new, but without saying 'oh it's not that I don't know anything. It's just I don't know necessarily about this.'

M   Right.

T   The displays!

M   Right.

T   How to put up backing paper! We could have spent quite happily a couple of weeks on how to do that one thing and I think we had one lecture in the first year on how to display.

SM   Right.

VT   And when you come to do it you're like 'aah, alright then you know it's all got to go on the wall

SM   But then I mean I remember you're doing this gorgeous, it had so much on it, it was lovely. So that would be a need!

VT   (Laughter) Yes.

SM   What were the most and least useful aspects of your training?

VT   Uhm, ooh, I think the least useful was actually in our science training. I had a form from the University they wanted me to fill out and even when we specialised, and I specialised in Key Stage 1, all the science was Key Stage 2, so I've come to Key Stage 1 science and I've made a right mess of it this year.

SM   Right.

VT   It's very difficult to teach and without the supporting staff in school, science has gone by the wayside a bit.

SM   Right.

VT   I think the language training was the most useful stuff we did, because we did a lot on bi-ligualism and pupil mobility and I've had, I had six children join my class in the course of a year and five leave.

SM   Gosh.

VT   We worked it out at the end, which is rather a lot.

SM   And also you've got quite a mix haven't you, an ethnic mix.

VT   Yes, sixteen languages, no seventeen, when they all left.

SM   And they've all left?

VT   No, when they went up to the Juniors.

SM   Oh right.

VT   I had one come in a couple of weeks ago with only French. So long live GCSE French is all I can say because I managed to get by very well.

SM   Oh good! (Laughter) It has been said that voice is the teacher's most important professional tool, would you agree with this or do you feel your voice has been of limited importance overall?

VT   Well I think my voice combined with my look.

SM   Right

VT   It's the look and the voice that they know they're in trouble or that I'm really happy

SM   Right.

VT   The glare and the I've either gone very quiet or is screaming again.

SM   Right. Yes.

VT   It's very important.

SM   Very important. Now you can be as rude as you like but how effective was the voice care training in preparing you for the vocal demands of teaching?

VT   It was good. I mean I'd done loads before

SM   Yes, of course.

VT   I went to the voice care thing as something to do at the end of the year. (Laughter)

SM   Then you got involved in all this!

VT   Things like lowering your voice, rather than shouting and getting it across, and it does and every so often you just need a kick up the bum to remember that, you know, if you actually boom you'll get them quiet. Like at Christmas where I actually silenced the whole of Year 2 and the two teachers at the Christmas Party, which was no mean feat.

SM   Environmental factors are implicated in vocal disorders, which have you been particularly aware of?

VT   My room is really really serious, it's got a huge ceiling. It's a huge room and everything is direct whole class teaching, so it's me talking all day. Because the Borough Maths scheme, the Borough English scheme, everything is 'you say this and the children listen or join in with you'. So it's constant talking in what is a very big room and it's very hot in the summer. It's very dry in there.

SM   How many sessions per week have you spent teaching?

VT   Twenty.

SM   Twenty?

VT   Yes, four a day.

SM   Right and was this whole class teaching, small group work, presentations or a mixture of all these?

VT   I'd say 90% of it is whole class teaching, there's little bits of group work where they get on with an activity and then you're talking to sort of five or six children or sort of a Special Needs group.

SM   Right and then the next question which you've almost answered is 'for how much of each session were you talking?

VT   Again sort of 90% at a time. Talk, talk, talk, talk, talk.

SM   Right and was this generally at high volume or at a lower volume?

VT   Uhm, I'd say it was quite at a high volume because it is to the whole class and if they're all sat in that horseshoe you've got to project your voice. It's not so bad when they're on the carpet, because I know you can wriggle closer and say 'I'm not shouting to you over there. Come here!'.

SM   Right.

VT   But most of it is at their tables.

SM   In the past we discussed major stress factors such as pressure of work, limited support, too much paper work. Would you now view them in a different light?

VT   Uhm, not really. They're still doing things, I mean writing reports, it took me two hours per child.

SM   Did it?

VT   And there aren't enough hours in the day. We did get, the school were very good, they gave us a day off each to write reports and, but in the end I was cutting and pasting, because we were doing them on the computer, but most of them ended up as being cut and pasted, because it was taking too long and I didn't know what to write. It was something university didn't cover either, they just say 'write positive things!'. Yes, but how do I write what we've done in maths this year? They were really hard to do.

SM   So that, I mean that must have been well you've got twenty something?

VT   Twenty-seven.

SM   Twenty-seven.

VT   That nearly finished me off at the end of the year. I have to say that was too much stress. We had a trip at the end of the year, we had an end of year assembly and I took some children to a music festival and I ended up organising the Year 2 trip and assembly, which obviously my colleagues should have done,

SM   Yes.

VT   but one was leaving and couldn't be bothered, one was moving down to Reception and she couldn't be bothered. So Muggins here did it and it was too much with reports and everything. I can't do it all.

SM   It's a lot. I think you've had a lot to deal with. So what coping strategies have you used to deal with these stress factors?

VT   Uhm, generally I haven't, so I sort of come home and moan at Tim unfortunately. He's had a lot of hassle from me in this last term. I haven't coped very well at all. I mean now it doesn't feel like I'm on holiday because I'm still really stressed, really tired. I let my joint disorder get really bad, because school had to come first and I completely ignored my joints and now I'm suffering for it.

SM   Right. Because I remember when we talked last, certainly the first term you were very stressed because of all the work things and you were working at weekends then. By Easter time I remember you'd taken a bit of time out and you intended to move up to   , but then presumably that then fell by the wayside.

VT   Then in the summer term, yes with the SATS, which were awful.

SM   Were they?

VT   I found them really stressful, because I felt really guilty inflicting this on the children and all their parents saying 'have they done this today?'. 'Oh I'm doing it some time this week', but I wouldn't tell them when, because I managed to make everything, including the maths test, a game.

SM   Oh did you?

VT   I did. They all thought this was great fun and a competition and bribery for writing tasks. You know the best story gets a book, you know?

SM   Really? Yes, oh that's lovely because then it means that they then didn't feel.

VT   And then someone said to me, one of the kids at the end,
                  when are we doing our exams?'. 'Exams, we don't   ,
      do exams'. and I thought we've just finished all our SATS and he's asking when the exams are.

SM   Oh that's good.   How have you changed and developed personally over the past year?

VT   Uhm, I can't go out without looking at children as though they're going to misbehave. If they're going to misbehave I have to glare at them. If they're on a bus and I don't know them, you know you just look at them with that teachers' stare. You know 'you will behave, you will be quiet!'

SM   Right.

VT   I tend to avoid   shopping now if I can possibly help
      it.

SM   Really?

VT   '   '

SM   Right,

VT   And in fact a couple of them have joined the Church.

SM   Oh have they?

VT   So processing back from the choir stalls the other week, I
      got two kids running up to me tugging at my cassock, going
      /   ,   .'. *'Oh not here as well'*. Bless
      them. (Laughter)

SM   Do you feel more confident or do you feel other changes, I
      mean apart from those sort of larger more social changes if
      you like? Anything in terms of your own.

VT   I feel like I can do it. I did lose my confidence a couple
      of weeks ago and felt I was an awful teacher and had these
      panic attacks and it was because the Head kept checking up
      on me on everything every two seconds. It was too much to
      cope with, but sort of underneath I knew I got brilliant
      SATS results. I got the best SATS results in Year 2, so I
      obviously did something right and one of my parents, I've
      got her daughter next year, and before they knew which class
      they'd got she was saying 'oh I'm really worried in case she
      hasn't got   .   .

SM   Oh really?

VT   And this mum knows I've only been teaching a year so I
      thought 'that's really, someone actually thinks I'm really
      good that she desperately wants her other child to have me
      too, which was really nice. It really made me feel lovely.

SM   Oh yes, that's superb actually. Yes. How much has the
      political climate within teaching compromised the *teaching*
      role?

VT   I tend to stay well out of it. I mean there's been a lot of
      Union debates and things in the school about appraisal and
      performance related pay. A lot of the older members of staff
      discuss it. It either doesn't bother me or it doesn't
      interest me.

SM   Right.

VT   Or I agree with something they all vehemently disagree with.
      So I just keep quiet.

SM   Right,

VT   You know, I don't really know why I bother being in the Teaching Union apart from insurance should I get mugged on the way to work, because the rest of it, I think having only taught for a year, you know, I'm just still grateful to be paid for doing the job.

SM   That's right. Yes and you don't notice things like, you know the introduction of the Literacy Hour and the Numeracy Hour things like that and all the SATS, you don't feel that's a sort of politicalisation in that you can't

VT   No, the Numeracy Hour is really good. I actually went on the three day training course.

SM   Oh did you?

VT   I pretended to be Maths Coordinator and that was really interesting for me because it went over some of the basics which have perhaps been missed at the start of the year.

SM   Right. So that's not been a problem. What would you do differently if you were starting this year again?

VT   Uhm, I wouldn't shout so much at the children. I did tend to shout an awful lot, more than I would like, but by then it was too late really to stop it.

SM   Yes.

VT   I'd try other methods of sort of keeping my voice down and using other things to get their attention. Because that also probably hasn't helped my voice really, shouting a lot.

SM   Yes. That sort of brings me onto the next question really 'What specific changes in your voice quality have you noticed during the year?

VT   By Christmas I felt that it had got a lot lower, not it doesn't sound any different. I've got used to it being as it is. Certainly I'm louder than I used to be, because I'm so used to speaking at a louder volume. 'Don't shout you're not in school now!'. (Laughter)

SM   Right, but you haven't noticed it, you know, obviously because you sing you would notice quality changes. So you haven't noticed that?

VT   No.

SM   Oh that's good. Making comparisons with your former career, can you identify the pluses and minuses of your new career?

VT   A definite minus is that you have them for longer. When I used to teach dancing you only have them for half an hour and then they go home and they wanted to be there.

SM   Yes.

VT   You see in school they don't always want to be there and I had a child cry continuously for a month every time I wanted him to do any writing.

SM   Really?

VT   It wasn't just a little sob, it was the full blown wail.

SM   Oh.

VT   And by the end of that I began to feel quite horrible. You know, maybe I am this horrid teacher, because I am ignoring him. But you can't give into children crying and things.

SM   No, so that's a minus. Any pluses?

VT   Yes, you get a better relationship with the children. My old class love me dearly, my new class are really thrilled to have me as their teacher.

SM   Yes.

VT   And I enjoy it. I'm the only teacher that skips around the playground. We did a sponsored skip.

SM   Oh did you?

VT   And I was the only mad fool teacher skipping with the children and saying 'can you do it like this?'. And they were going 'can you do it like this?'. Despite the fact I shouldn't be jumping up and down because of my joints and I then did suffer very badly that night.

SM   Yes.

VT   But I enjoyed it. It's a job I enjoy.

SM   Great. Oh that's nice. Will you be in teaching in two years' time?

VT   Oh definitely.

SM   Oh that's good.

VT   Twenty-two years time I'll still be in teaching.

SM   Oh really. That's excellent. That's really positive. Thank you very much.

APPENDIX 11
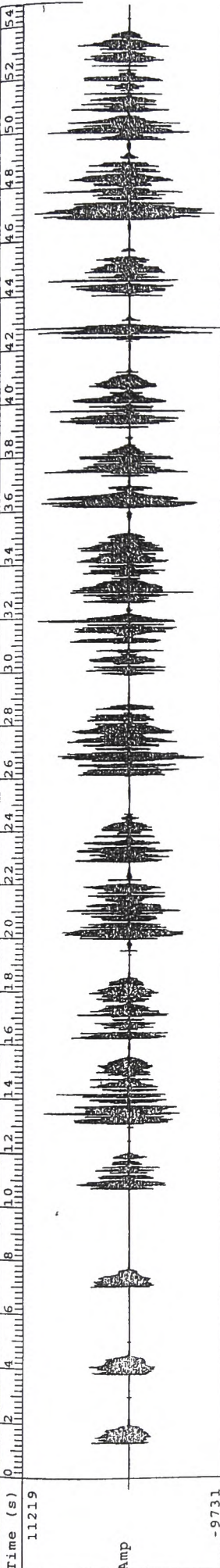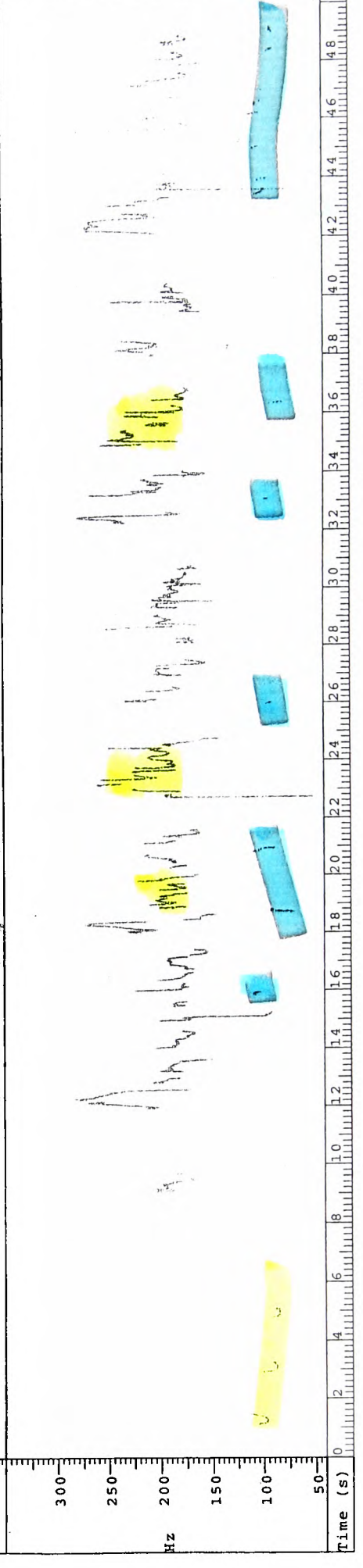
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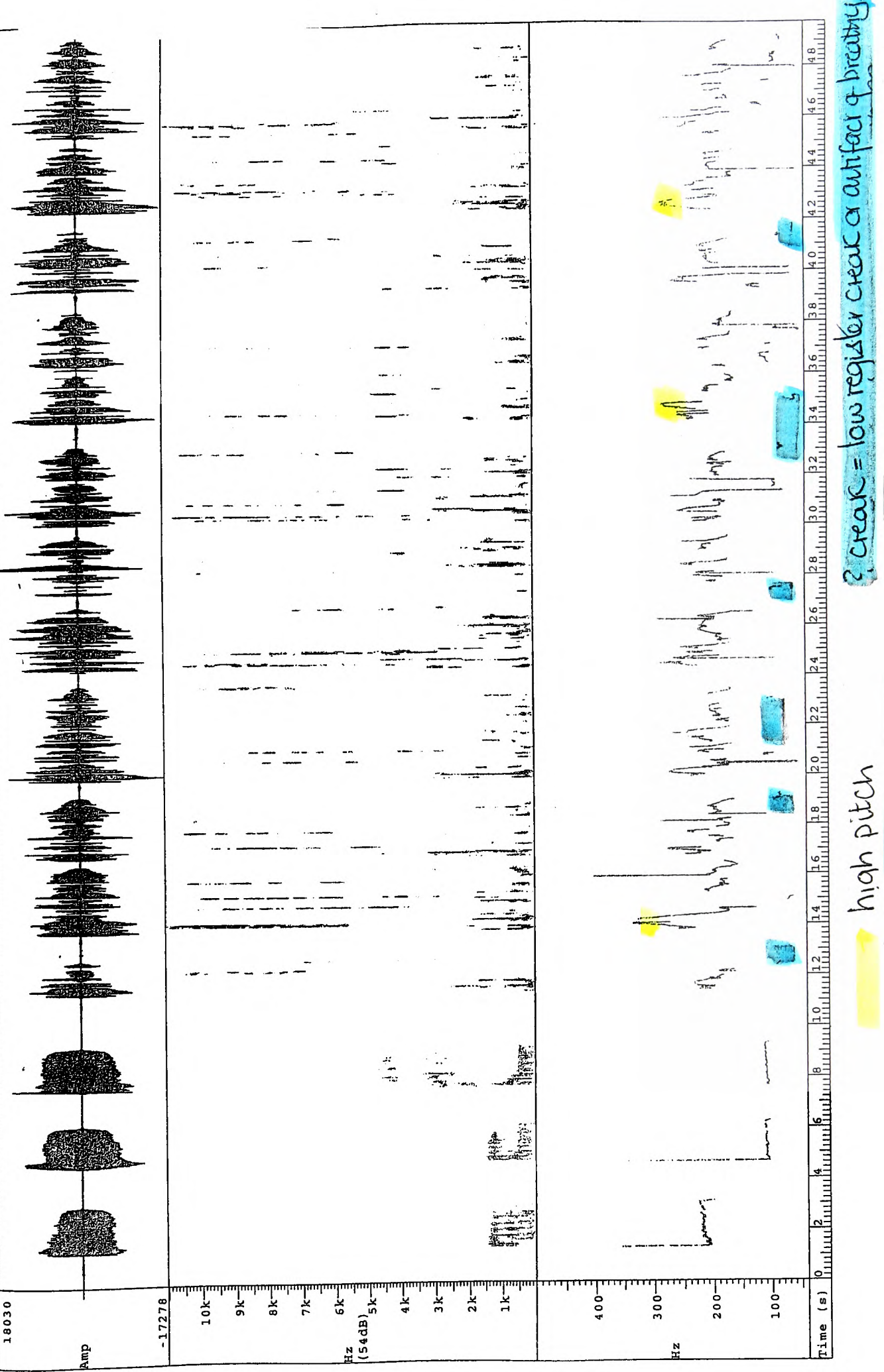
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? creak = low register or artifact or breathy

high pitch

SFS/WASP Vs 1.06

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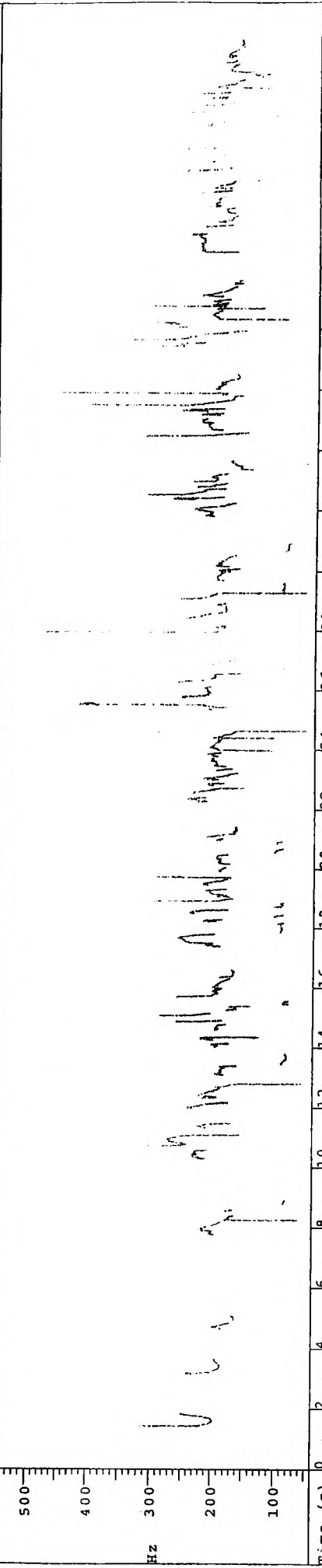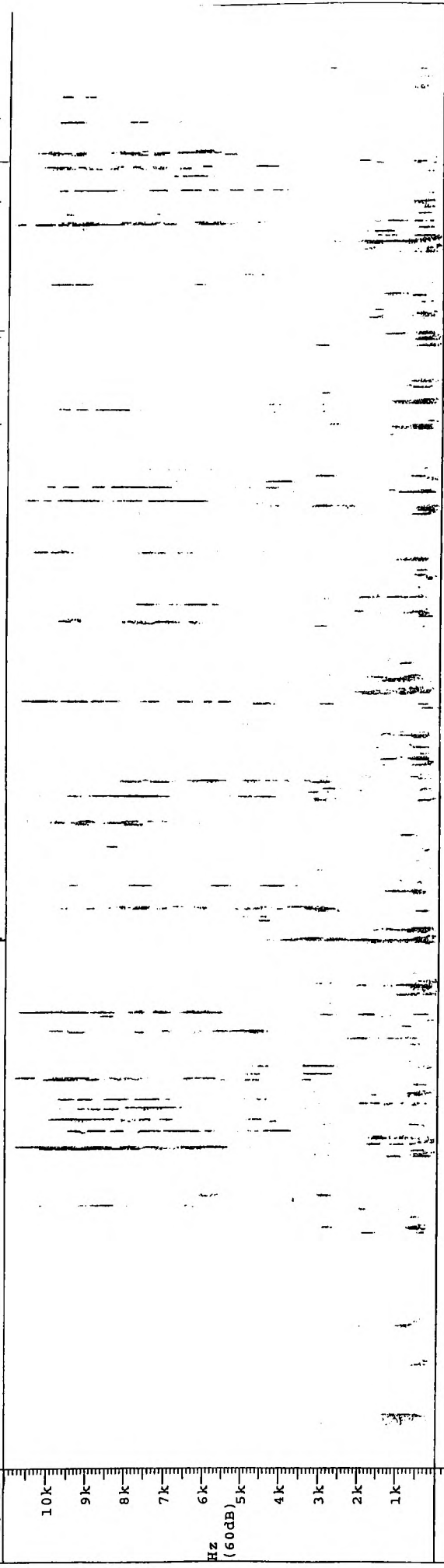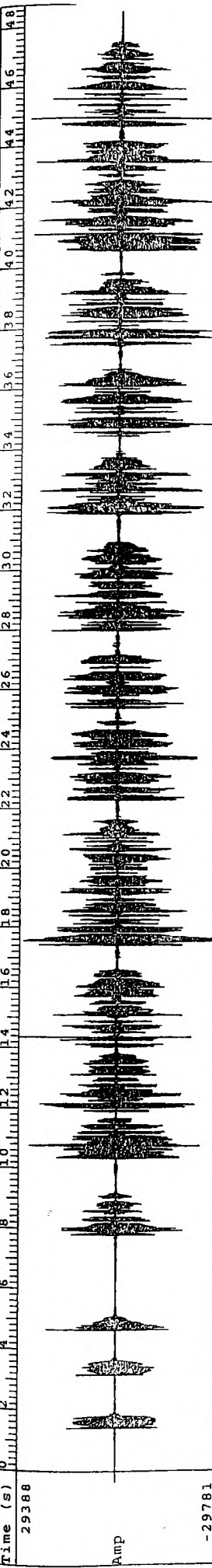
Somewhat less pitch movement
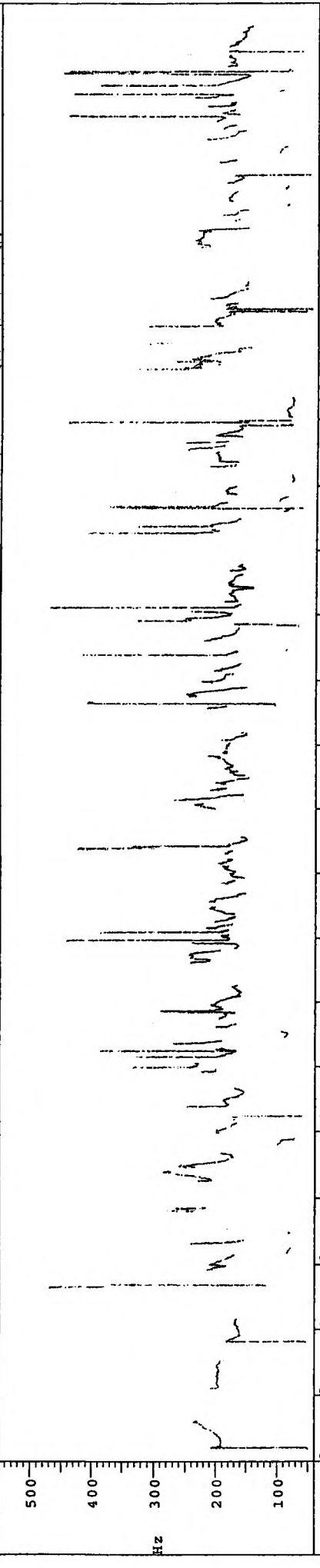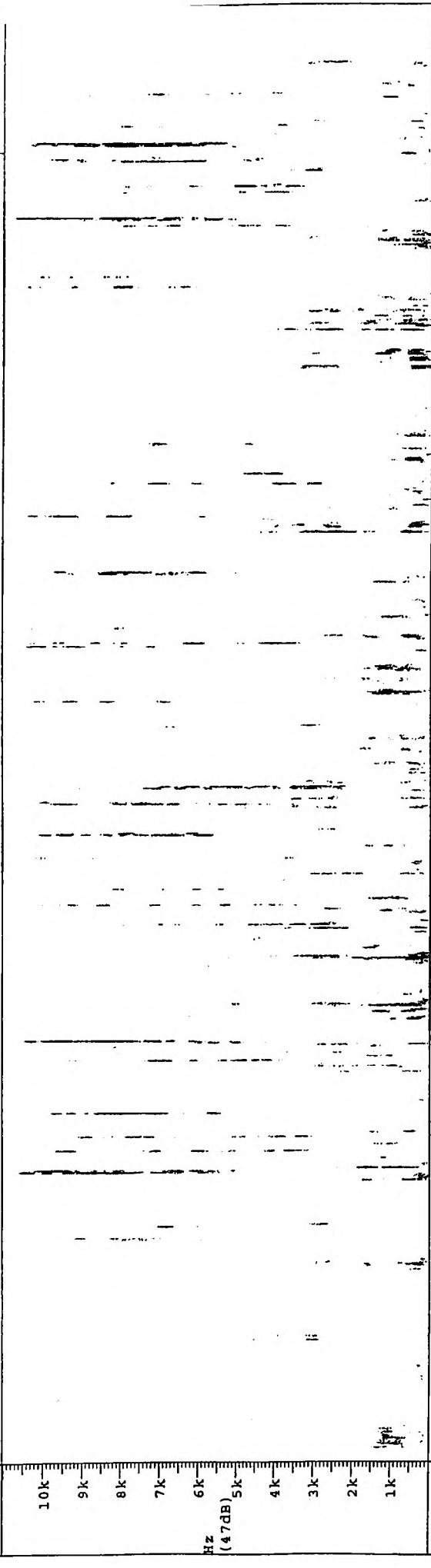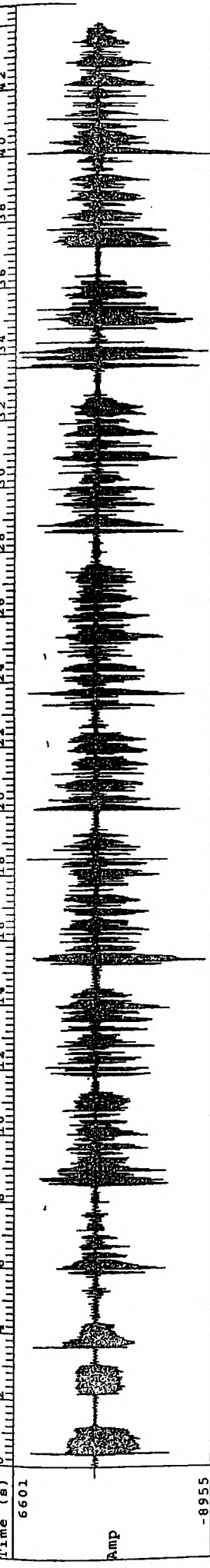
narrow pitch range evident + limited intonation evident.

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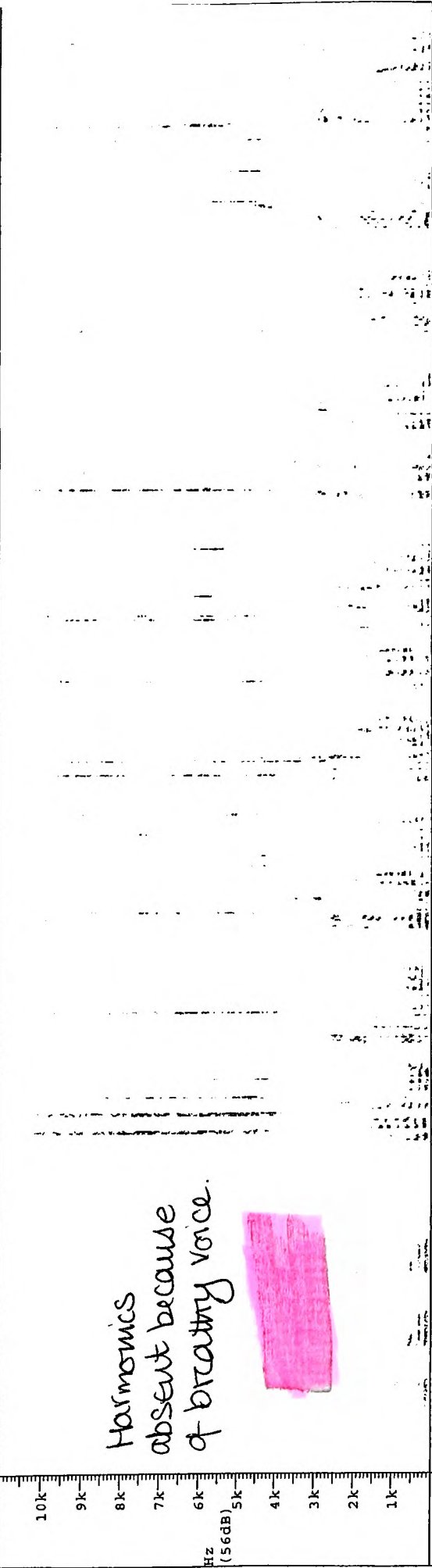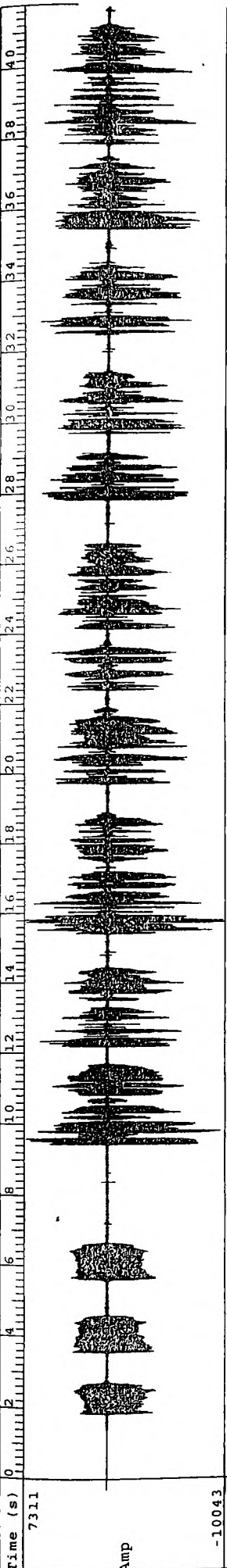
Harmonics
absent because
of breathy voice.

Fig. 2

octave
shift
↑
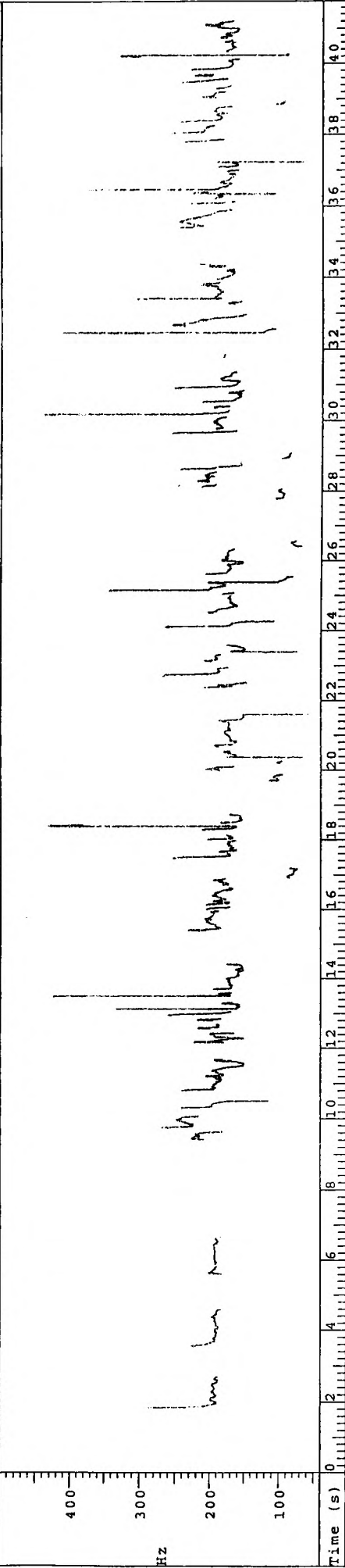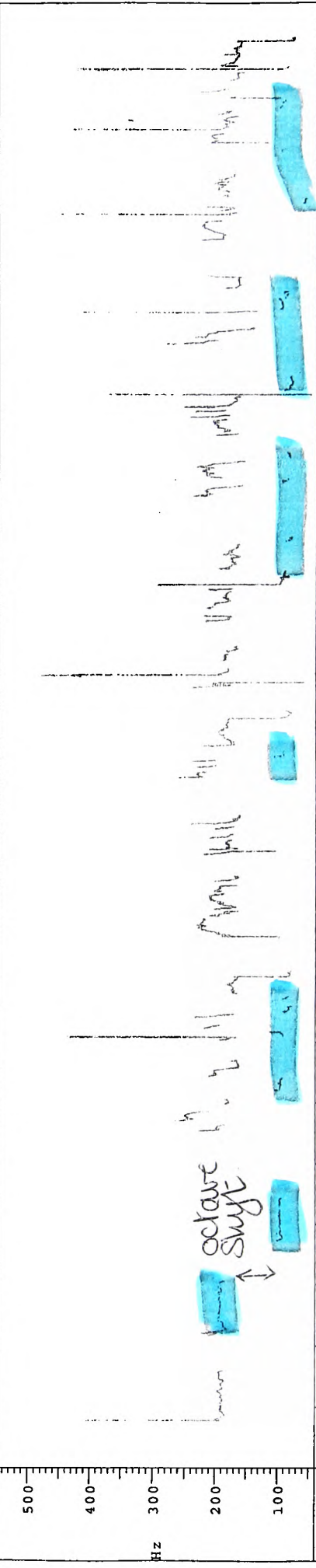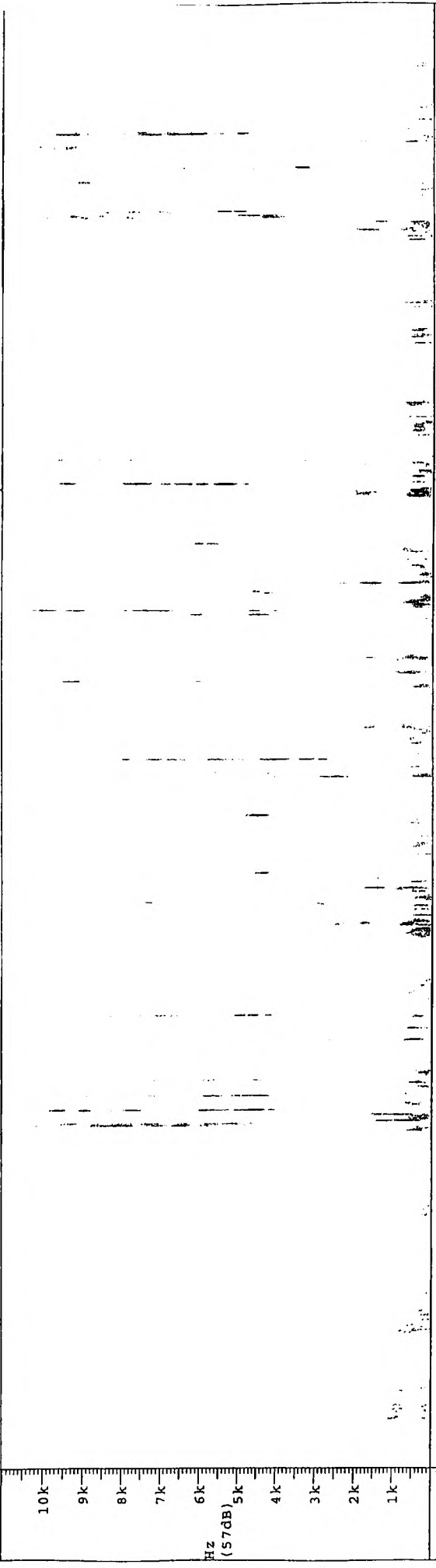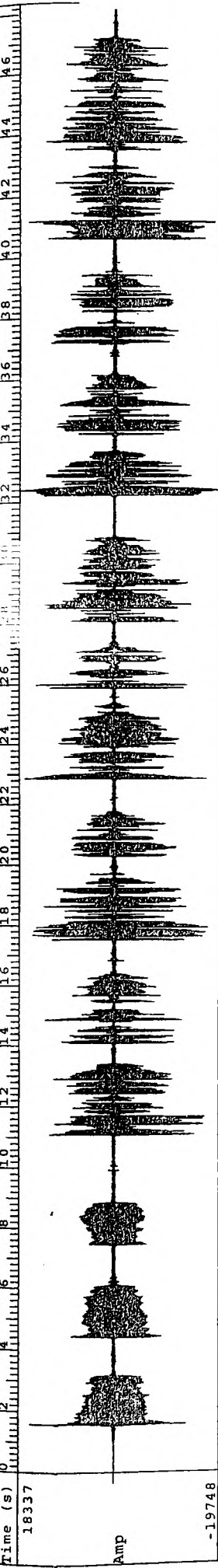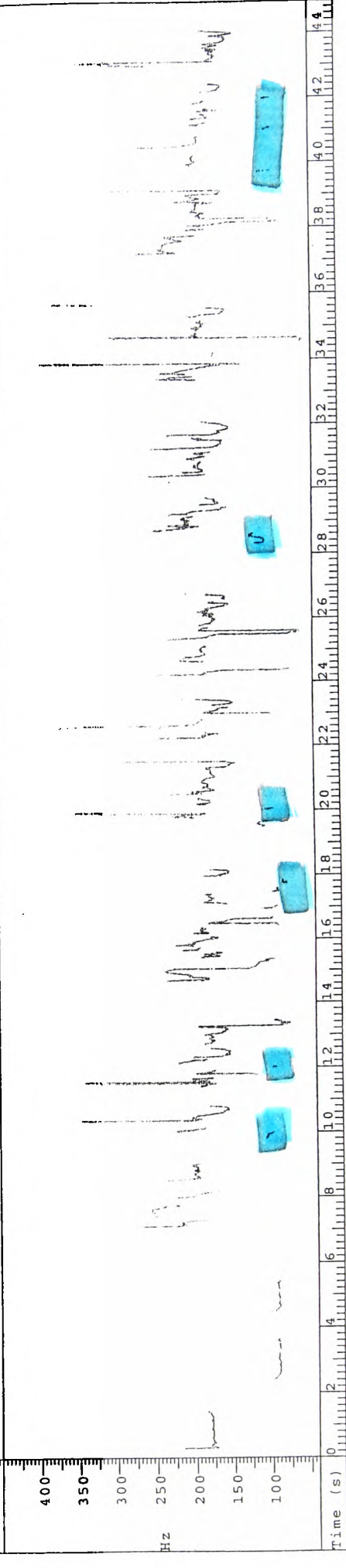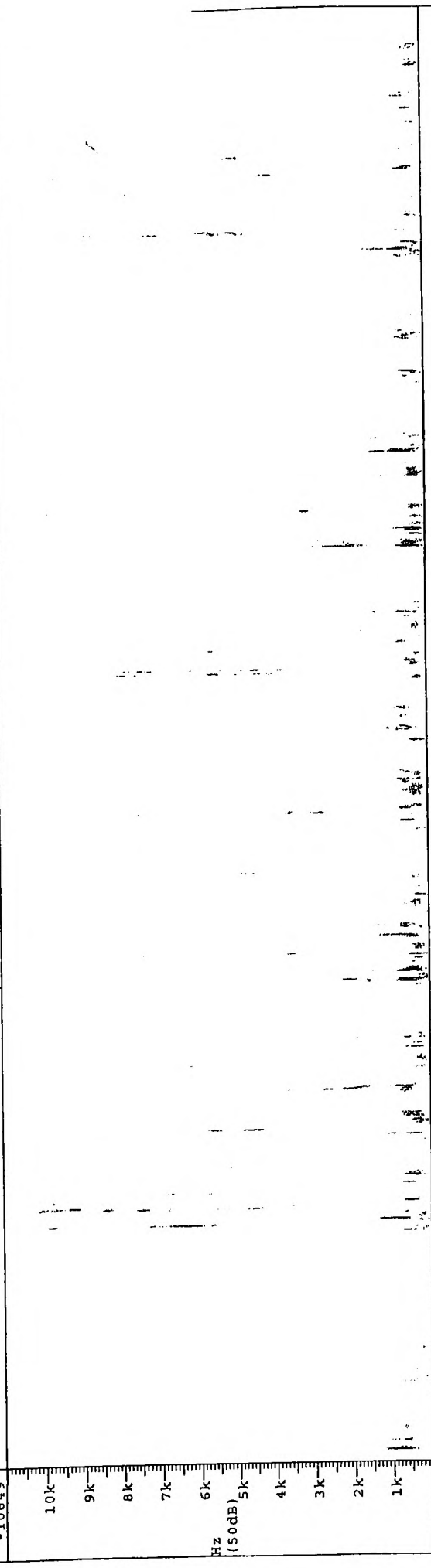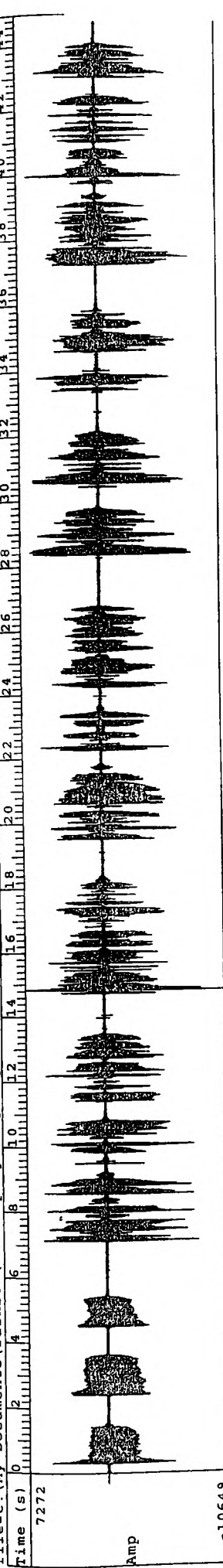
creak

creak

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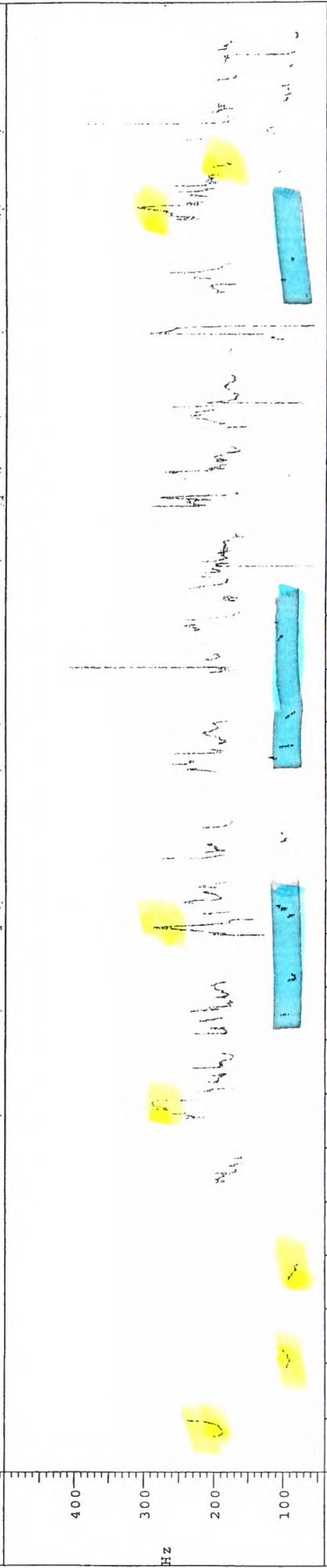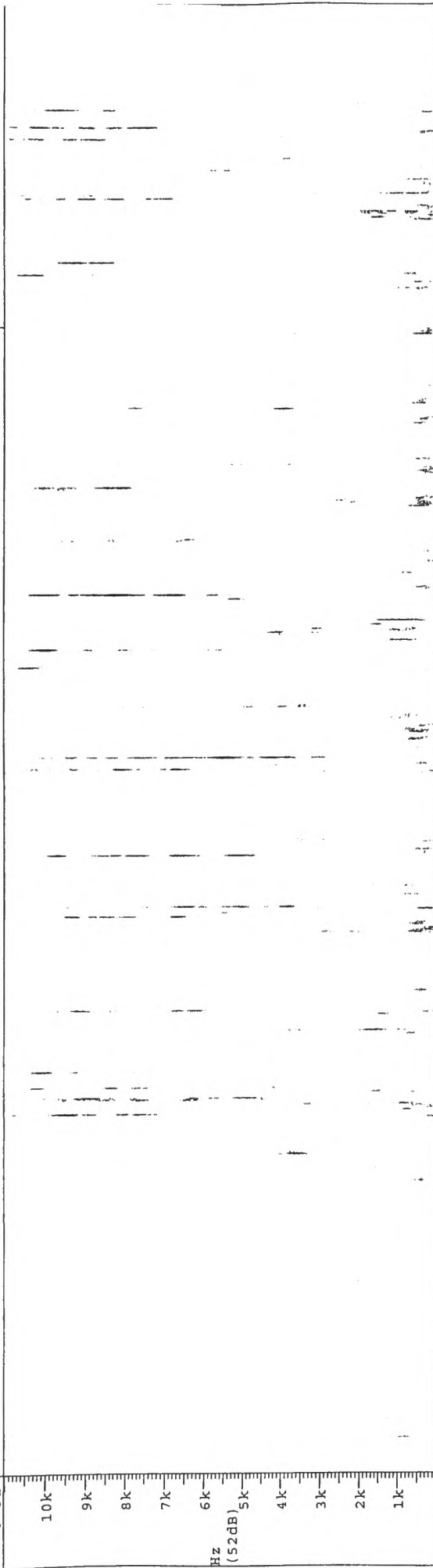
wide range of fo supports intonation   possible creak

SFS/WASP V8 1.06
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pitch breaks

creak

pitch change   cReak

range of intonation

creak

SFS/WASP vs 1.66

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Time (s)

10073

Amp

-11064

Hz
(51dB)

10k
9k
8k
7k
6k
5k
4k
3k
2k
1k

pitch plus

Hz

400
300
200
100

creak

Time (s)

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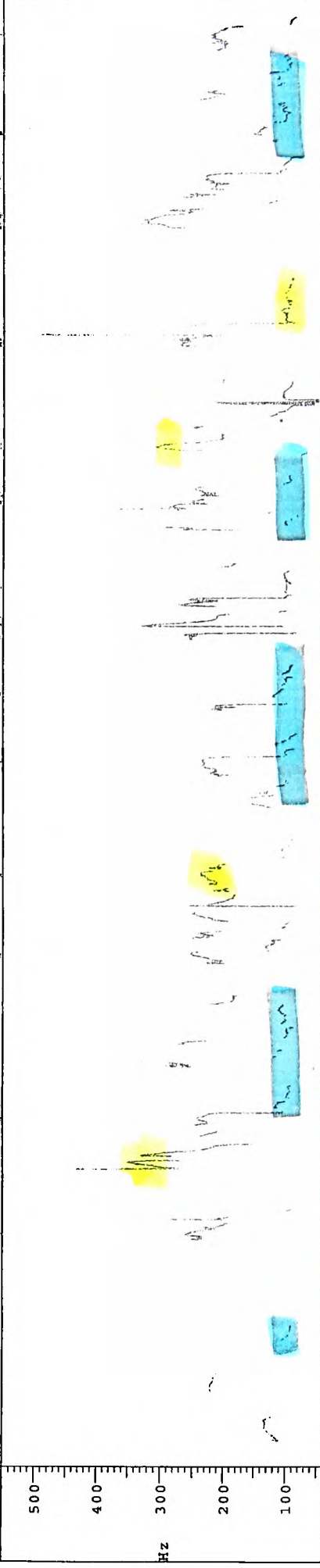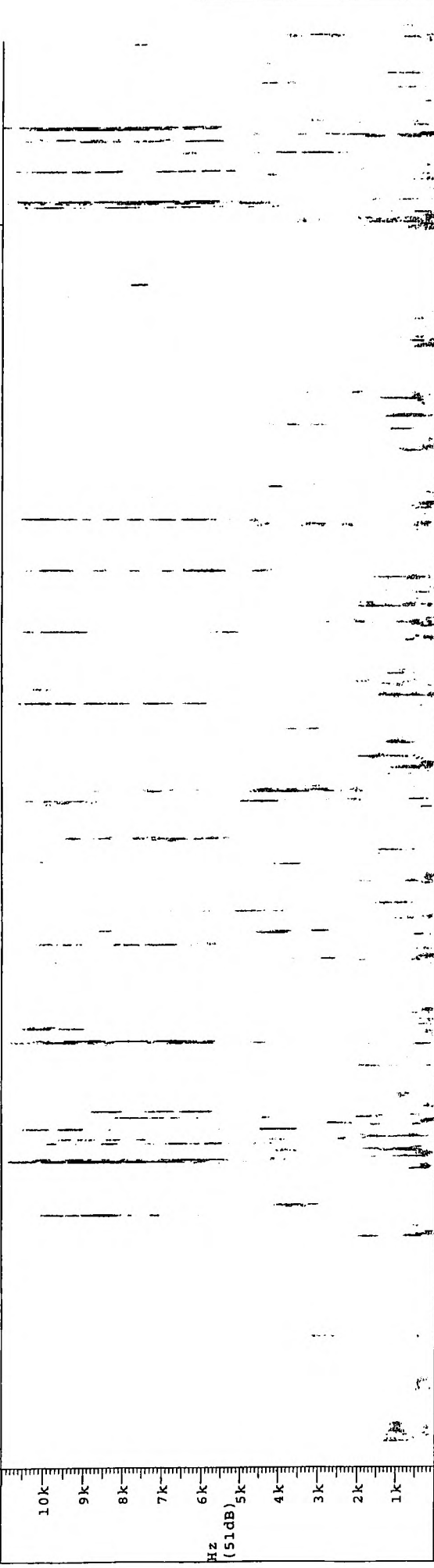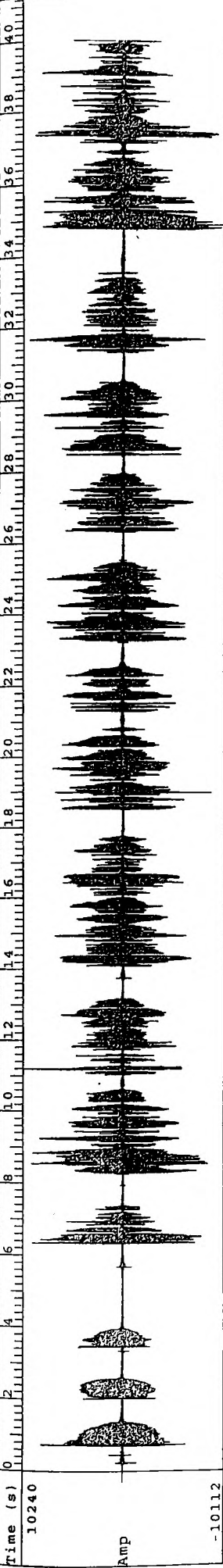
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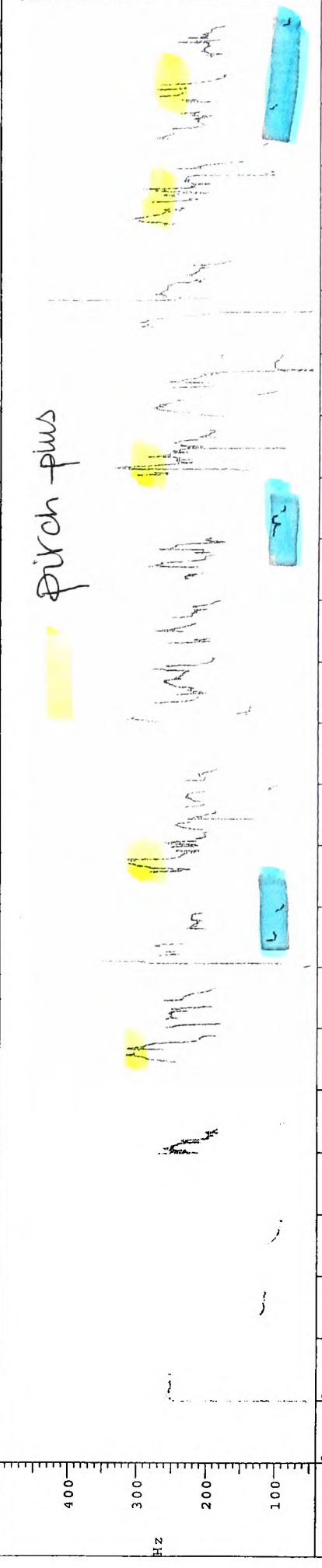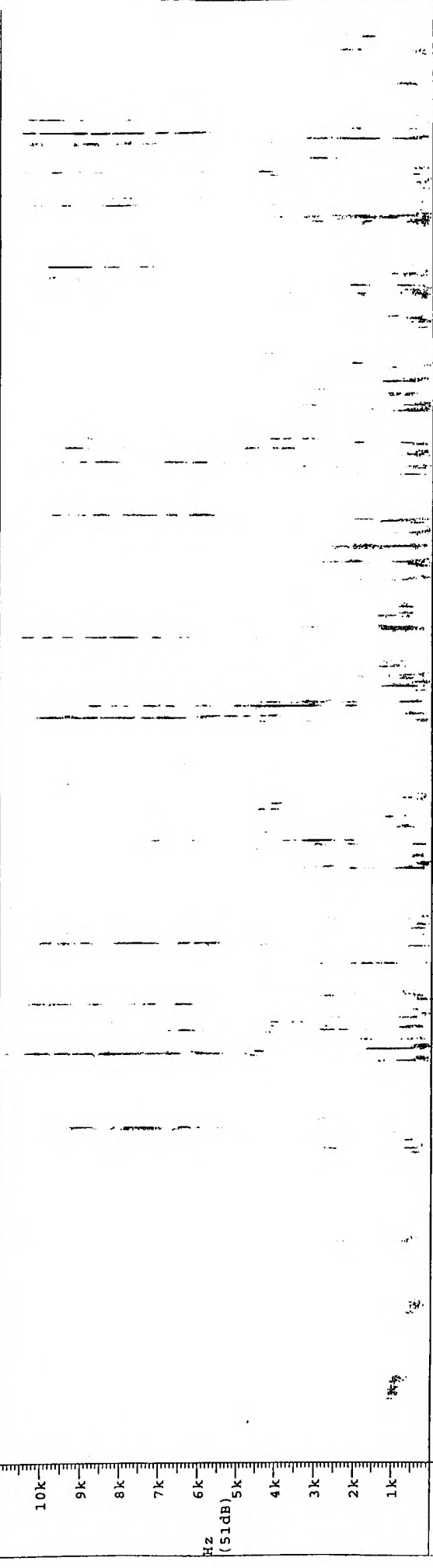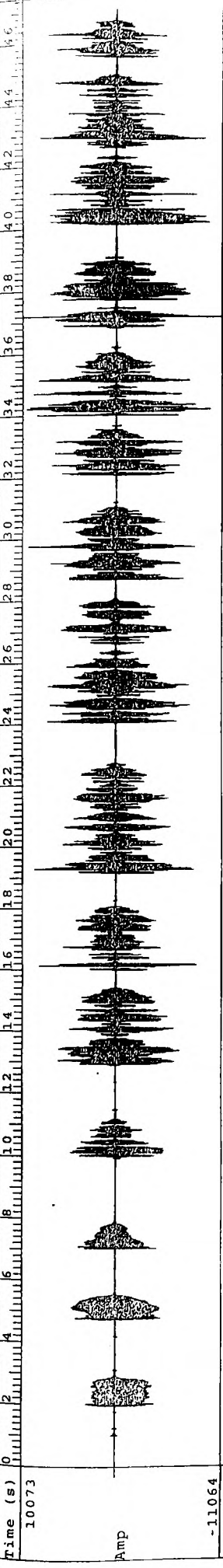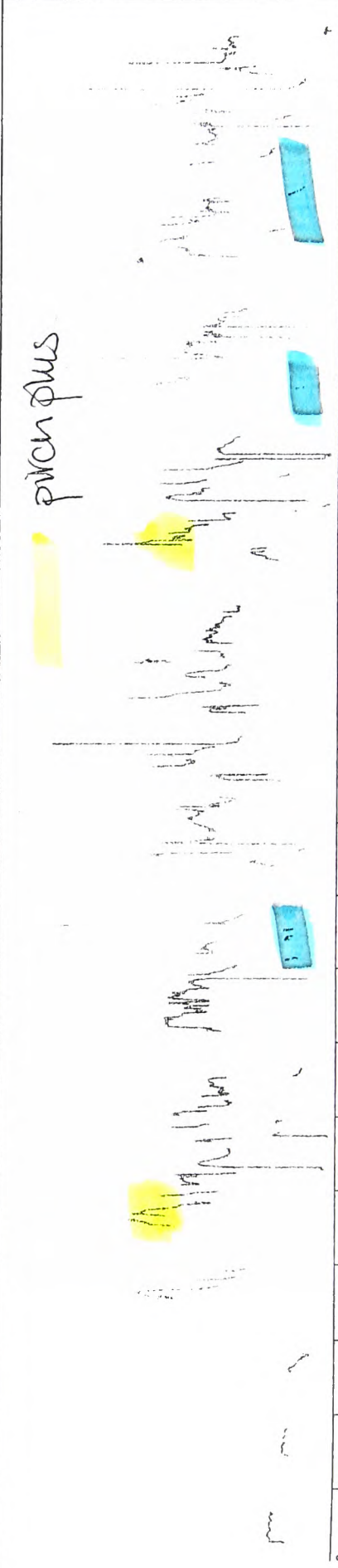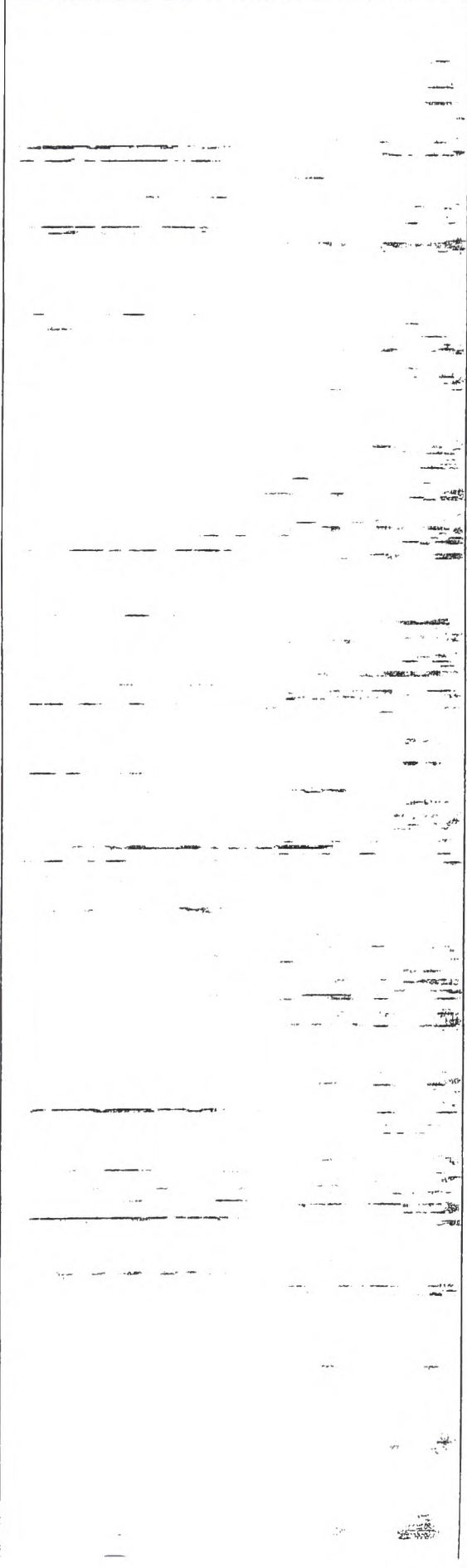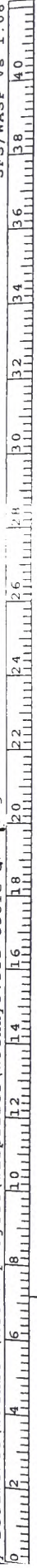
pitch plus

creak

APPENDIX 12

VOCAL PROFILES OF DESIGNATED RESPONDENTS

Respondents F9, P8, P1 and F2 experienced negative change in voice quality throughout the year.

Subject F9

Breathing related

Runs out of breath at the end of sentences

Vocal tract related

Has nasal catarrh

Coughs up catarrh

Experiences a dry throat

Experiences discomfort when coughing

Likes spicy food

Often wants to clear throat

Vocal vulnerability

Has been hoarse before

Has lost voice before

Stress/anxiety related

Worries about own voice

Self-description as a tense person

Worries unnecessarily

Voice production related

Runs out of air at the end of sentences

Subject P8

Breathing related

Short of breath

Runs out of breath at the end of sentences

Chest problems

Asthmatic

Vocal tract related

Often wants to clear throat

Post nasal catarrh

Coughs up catarrh

Allergic

Asthmatic

Works in dusty conditions

Uses a nasal spray for asthma

Vocal vulnerability

Throat feels dry after using voice a lot

Often wants to swallow

Feels a tightness in throat

Has had hearing tested

Likes spicy food

Stress/anxiety related

Worries about own voice

Voice production related

Runs out of air at the end of sentences

Uses a nasal spray for asthma

Subject P1

<u>Breathing related</u>

Chest problems

Short of breath

<u>Vocal tract related</u>

Allergic

Experiences post nasal catarrh

Coughs up catarrh

Works in dusty conditions

Throat often feels dry

<u>Vocal vulnerability</u>

Experiences a feeling of having 'a lump in the throat'

Often wants to clear own throat

Has completely lost voice when shouting

Has lost voice on another occasion

Works in dusty conditions

Throat often feels dry

<u>Stress/anxiety related</u>

Experiences a feeling of having a 'lump in the throat'

<u>Voice production related</u>

Short of breath

Allergic

Post nasal catarrh

Feeling of having a lump in the throat

Subject F2

<u>Breathing related</u>

Smokes over 20 cigarettes a day

<u>Vocal tract related</u>

Throat often feels dry

Throat often dry after using voice a lot

Smokes over 20 cigarettes a day

Experiences nasal catarrh

Coughs up catarrh

Experiences a feeling of 'having a lump in the throat'

<u>Vocal vulnerability</u>

Needs to clear throat a lot

Throat feels tight

Likes spicy food

Voice becomes weaker as she talks

Smoking

<u>Stress/anxiety related</u>

Throat feels tight

<u>Voice production related</u>

Smoking

Voice weaker as she talks

Respondents P5, FN1, F7 and F6 experienced no change in voice quality throughout the year

Subject P5

Breathing related

None reported

Vocal tract related

Likes spicy food

Throat dry after using it a lot

Likes hot foods and liquids

Has to swallow often

Experiences discomfort when coughing

Often wants to clear throat

Vocal vulnerability

Experiences a feeling of tightness in throat

Experiences a feeling of having a lump in the throat

Has been hoarse before

Shouts

Throat feels dry after using voice a lot

Describes own voice as loud

Has had hearing test

Stress/anxiety related

Worries about own voice

Describes self as a tense person

Voice production related

Wants to clear throat

Feels tightness in throat

Subject FN1

Breathing related

Short of breath

Runs out of air at the end of sentences

Smokes over 30 cigarettes a day

Vocal tract related

Throat feels dry after using voice a lot

Works with chemicals

Coughs up catarrh

Vocal vulnerability

Has been hoarse before for more than a day

Smokes

Hoarse after a night out

Describes own voice as loud

Stress/anxiety related

Worries unnecessarily

Worries about voice when hoarse

Describes self as tense

Wakes with teeth clenched

On anti-depressants and tranquillisers

Voice production related

Runs out of breath at end of sentences

Shouts

Subject F7

<u>Breathing related</u>

Smokes

<u>Vocal tract related</u>

Often wants to clear throat

Dry after use

<u>Vocal vulnerability</u>

Smokes

Hoarse after a night out

Dry after use

Often wants to clear throat

Has been hoarse for more than one day

Has lost voice trying to shout

<u>Stress/anxiety related</u>

Worries about voice all the time

Sits on edge of chair

<u>Voice production related</u>

Smokes

Sings at work and at home

Sings socially

Subject F6

Breathing related

None reported

Vocal tract related

Likes hot liquids and spirits

Throat often feels dry

Dry after use

Vocal Vulnerability

Been hoarse more than a day

Hoarse after a night out

Likes hot liquids and spirits

Likes spicy food

Stress / Anxiety related

Worries unnecessarily

Voice production related

None reported

Respondents F1, P6, F5 and P3 experienced positive change in voice quality throughout the year

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Subject F1

Breathing related

Short of breath

Chest trouble

Vocal tract related

Throat feels dry

Feels a tightness in throat

Works in dusty conditions

Has worked with chemicals

Vocal vulnerability

Been hoarse before

Has difficulty making self heard

Has had to alter job because of voice

Voice is weak after a night out

Throat feels dry after using voice a lot

Feels a tightness in throat

Has had difficulty hearing

Was hoarse as a child

Shouts

Stress/anxiety related

Worries unnecessarily

Self description - a tense person

Sits on edge of chair

Had worried about voice

Worries about voice now all the time

Voice production related

Short of breath

Chest problems

Subject P6

<u>Breathing related</u>

None reported

<u>Vocal tract related</u>

Throat feels dry after using it a lot

Suffers from frequent nasal catarrh

Coughs up catarrh

<u>Vocal vulnerability</u>

Often wants to clear throat

Has friends/relations/colleagues who are deaf

Shouts

<u>Stress/anxiety related</u>

Worries about voice all the time

<u>Voice production related</u>

None reported

Subject F5

<u>Breathing related</u>

None reported

<u>Vocal tract related</u>

None reported

<u>Vocal vulnerability</u>

Throat feels dry after using voice a lot

Been hoarse

Voice returned gradually

Hoarse after a night out

Drinks beer or spirits

Voice seems very loud

<u>Stress/anxiety related</u>

None reported

<u>Voice production related</u>

None reported

Subject P3

Breathing related

Short of breath

Chest trouble

Vocal tract related

Works in dusty conditions

Allergic

Vocal vulnerability

Throat dry after using voice a lot

Voice seems very soft

Hoarse after a night out

Been hoarse for more than a week

Voice returned suddenly

Sings at home or at work

Had a laryngeal examination

Out at weekends and during week

Stress/anxiety related

Sits on edge of chair

Voice returned suddenly

Takes sleeping pills

Has used tranquillisers or anti-depressants

Voice production related

Short of breath

Allergies

Chest troubles

APPENDIX 13

APPENDIX 13

RESPONSES FROM SEMI-STRUCTURED INTERVIEWS

At the end of each term respondents were asked a number of questions. A summary review of the responses to each question is found in Chapter 7, pages 162 to 178.

Below, each question is shown in italics and each response is referenced by subject number. While the responses contained are a verbatim account of the answers they are not the full answer but are chosen to reflect as accurately as possible the essence of the reply.

TERM 1

Q.1. *What difficulties did you experience in the transition from student to teacher?*

Further Education

F1 Greater responsibility

F2 Discipline, standing in front of the class

F3 Responsibility, huge amounts of preparation, quite nervous

F5 Responsibility to self, students, college

F6 Responsibility to students, lack of confidence, going in regardless

F7 Responsibility, daunting being in the limelight, having to go on regardless, feeling totally on your own

F9 Being responsible for other people, lack of confidence, not sure I can do this, am I up to this?

Primary Education

P1 Responsibility, being on own. 'buck stops here', anxiety about procedures, getting very tired, long hours

P2 Responsibility for the group, feeling I'm still a student, voice too high when angry, lot to learn on the spot

P3 Long hours, hard feeling like a professional, voice kept drying up

P4 Responsible for class completely, being on your own, special needs in classroom

P5 Responsibility generally, difficult to cope with all demands

P7 High level of responsibility

P8 Responsibility for children, tiredness, combating tiredness

In grouping these responses, the following are of note:

- Three respondents in Further Education cited lack of confidence

- Two respondents in Further Education cited being on their own

- Two respondents in Further Education cited the need to 'go on' regardless of how they felt which, although not directly stated, is related to feelings of responsibility.

- Two respondents in Further Education cited being 'in the limelight' in 'front of the class'

- One respondent in Further Education cited long hours worked in terms of preparation

- One respondent in Further Education cited discipline

- Three respondents in Primary Education did not cite lack of confidence directly but indirectly referred to it, i.e. 'anxiety about procedures', 'hard feeling like a professional'

- Two out of seven of the respondents in Primary Education cited long hours worked

- Two respondents in Primary Education cited being on their own

- Two respondents in Primary Education cited the demands of the job

- Two respondents in Primary Education cited voice problems

- Two respondents in Primary Education cited tiredness

Q.2. *Can you identify some of the major stress factors within the job?*

Further Education

F1 Students' time-keeping, politics, getting equipment, lack of confidence

F2 Organisation of the college, politics, time-keeping and negative attitude of students

F3 Working for an agency 'ELS', so not treated as a full-time member of staff. Critical students, teaching mixed-ability students

F5 Keeping to the time-table and planning

F6 Proving own competence, not feeling confident

F7 The way 1 work, doing hours in different colleges, marking (95 papers in two weeks)

F9 Endless cycle of work, preparing new material, keeping going

Primary Education

P1 Tiredness, long hours, OFSTED, time-table

P2 Lack of time, demands of so many people, OFSTED, staff backbiting/politics

P3 Classroom management, school politics

P4 Fifteen special needs pupils in class of 30, behaviour management, paperwork, hours worked in preparation

P5 Thirteen special needs pupils plus one deaf boy in class of 30, having to stand up all day, (head teacher's directive), no desk or chair, Literacy hour, tiredness

P8 OFSTED, class assembly, class control, observation as a newly qualified teacher.

In grouping these responses the following are of note:

- Three respondents in Further Education cited the work load
- Three respondents in Further Education cited time-keeping
- Two respondents in Further Education cited negative students
- Two respondents in Further Education cited college politics
- Two respondents in Further Education cited lack of confidence
- One respondent in Further Education cited difficulty of agency working
- Four respondents in Primary Education cited classroom management
- Four respondents in Primary Education cited tiredness from long hours
- Four respondents in Primary Education cited difficult staff relationships
- Three respondents in Primary Education cited OFSTED inspections
- Two respondents in Primary Education cited demands of special needs' pupils
- Two respondents in Primary Education cited politics

Q.3. *What vocal changes did you note during the term?*

Further Education

F1 Larynx ached, felt sort of bruised, voice dry and phelmy (sic), tired

F2 Voice was becoming higher so trying to use breath to make it stronger

F3 Shouting and abusing the voice

F5 Voice became higher initially and then deeper

F6 Couldn't conserve voice - became squeaky

F7 Singing voice affected, not able to sing as long or so well, speaking voice fine

F9 Voice getting sore, 'felt my voice'

Primary Education

P1 Start to speak and voice would stop, no complete voice loss

P2 Voice got too high, trying to lower it

P3 Voice got lower. croaked a lot more, lost voice at end of sentences for some seconds

P4 Nothing would come out, no volume, voice tired, cleared throat a lot

P5 Voice felt very tight, getting lower, lost my voice

P7 Strained voice by shouting, sore throat, no major problem

P8 Voice got a lot deeper, dryness, lost voice but not completely, bad for a week, could not use it throat tired

In grouping the responses the following are of note:

- Three respondents in Further Education cited voice becoming higher
- Two respondents in Further Education cited laryngeal ache or soreness
- Two respondents in Further Education cited voice tired
- One respondent in Further Education cited loss of singing voice
- Five respondents in Primary Education cited voice loss
- Three respondents in Primary Education cited voice becoming lower
- Two respondents in Primary Education cited voice becoming tired
- One respondent in Primary Education cited voice becoming tight
- One respondent in Primary Education cited voice becoming high

Q.4. *Did you find your voice equal to the task of teaching?*

Further Education

F2 I think so, but feeling a bit strained after five hours

F3 Not really

F5 Yes

F6 Yes

F7 Oh yes

F9 No not entirely, I think sometimes I don't feel I have enough power behind it, I still feel nervous about really raising my voice

Primary Education

P1 Most of the time

P2 Yes

P3 I've got a lot more control as the term has gone on, I've learnt to be a lot more flexible

P4 I think so for the majority of the time

P5 Thought I would never have problems with my voice, never had before but I can feel it playing up

P7 Yes

P8 Not all the time, I can't get a very loud shout as I used to, I can't lift it, can't get their attention in the hall

In grouping the responses, the following are of note:

- Three respondents in Further Education said yes
- Two respondents in Further Education said not entirely
- One respondent in Further Education said not really
- Two respondents in Primary Education said yes
- Two respondents in Primary Education said most of the time
- Two respondents in Primary Education said some of the time not really

Q.5. Is voice care seen as important by fellow staff members?

Further Education

F1 No they seem totally unaware of it

F2 I haven't discussed it with them

F3 No, no

F5 If you asked them they'd say yes but I think in practice I don't think it is

F6 I've never heard anybody

F7 I haven't heard anything

<u>Primary Education</u>

P1 I don't think so, no, some have bad voices but they just carry on

P2 I never hear anybody mention it

P3 Headteacher is quite concerned

P4 I don't really know I've not really discussed it

P5 No, not in the slightest, no not at all

P7 Not that I am aware of

<u>In grouping the responses the following are of note:</u>

- All respondents in Further Education inferred that voice care was not seen as important by fellow staff members

- Five respondents in Primary Education said voice care was not seen as important by fellow staff members

Q.6. *As you have become more comfortable in your professional role have you noticed any change in the way you use your voice?*

<u>Further Education</u>

F2 Not really

F3 I think yes because I am more relaxed

F5 I need to be conscious to slow down

F6 The first thing I did was to slow down

F7 I tend not to shout if I don't have to and I tend to try and keep my voice really low

F9 Not really no

<u>Primary Education</u>

P1 Possibly but you tend to just do things ... you just stand up and say things

P2 I'm tending to drop it down now rather than screeching, consciously aware of what I'm doing in the classroom so lets you get your voice in the right tone, drop it down

P3 I use it a lot more flexibly I don't talk at the same volume all the time I actually play around with my voice more

P4 I'm more aware on occasions of being more assertive but I wouldn't say it was very strong

P5 I'm not as anxious but I am more stressed

P7 Not really no

P8 You are in charge and I think that in itself makes you speak differently, which is maybe why the deeper voice

In grouping the responses the following are of note:

- Two respondents in Further Education said they had slowed down their speech
- Two respondents in Further Education noted no change
- One respondent in Further Education used a lower voice and tried not to shout
- One respondent in Further Education noted a more relaxed voice
- Two respondents in Primary Education used deeper voices
- Two respondents in Primary Education had not noted much change
- One respondent in Primary Education was less anxious, but more stressed
- One respondent in Primary Education was vocally more assertive
- One respondent in Primary Education used a more flexible voice

TERM 2

Q.1. *Now that you have completed another term, what changes in your approach to the job can you identify?*

Further Education

F1 Co-operating with students, thinking about teaching aids other than the voice

F2 Got over getting angry in my classes, become a little bit detached

F5 Having to use my voice a lot more, over students talking, at end sound quite hoarse

F6 Liked to have been more reflective but basically doing much the same since September

F7 Nobody actually tells you anything so I would have got students to do their assignments (lecturer had not been told in time)

F8 More relaxed, more laid back, less worried

F9 Last term actually felt more on top of it despite having more hours, spend an awful lot of time preparing everything

FN3 More emphasis on forward planning of workload

Primary Education

P2 Increased confidence, able to extend lesson diversity

P3 Don't shout, relaxed, don't take work home, greater confidence

P4 I don't know, there's been so many changes, everything keeps changing, challenges with LSAs

P6 Not to be so thorough, flexibility, more confident, don't worry, better giving feedback

P7 Much more organised and more tightly planned, I've adjusted to it, some things I could say I do quite well now

In grouping the responses the following are of note:

- Three respondents in Further Education cited work planning issues
- One respondent in Further Education cited a reduction in levels of anger
- One respondent in Further Education cited a desire to be more reflective
- One respondent in Further Education cited greater co-operation with students
- One respondent in Further Education cited increased voice use
- One respondent in Further Education cited an increased level of relaxation
- Four of the respondents from Primary Education cited increased levels of confidence
- One respondent in Primary Education cited a number of issues with respect to constant change
- One respondent in Primary Education cited increased organisation and planning

Q.2. *What stress factors have you identified within the job and have these increased or decreased since the last term?*

Further Education

F1 Sort of management negotiations, stressful how they operate in the staffroom

F2 How you get through to the young people

F5 Haven't got too much stress in relation to lesson etc., not enough leadership or organisation, trickle-down effect

F6 Still the feeling that am I fully competent to be doing this job?

F7 Stress increased as coming to end of the term working on four different sites driving to Watford then Ware then to Waltham Forest, need for a regular income

F8 General stress of preparing lesson and dealing with students has lessened, I am teaching them what's going to be on the exam paper is the stress

F9 Observation by Head of Department and Vice Principal, feeling responsible for students' performances, the financial situation

FN3 As an NQT I had no support which was incredibly stressful, expected to undertake a range of tasks with limited supervision

Primary Education

P2 Pressures from other teachers, can I do this do that?

P3 Pressure for the SATs, decreased stress

P4 Pressures have increased

P6 I think it is a stressful job, I have learned not to try to control the children so much, marking

P7 Destructive children continues low-level disruption, not being ready, not being prepared suddenly finding yourself having to think on your feet

In grouping the responses the following are of note:
- Four respondents in Further Education cited issues of stress
- Two respondents in Further Education cited management issues
- One respondent in Further Education cited being observed
- Three respondents in Primary Education cited increased pressure
- One respondent in Primary Education cited destructive children
- One respondent in Primary Education cited lack of preparedness
- One respondent in Primary Education cited stress

Q.3. *What do you consider to be your greatest success?*

Further Education

F1 I did three weeks on my own with a project which I delivered and I felt I did it really well

F2 I don't know really

F5 GCSE Media course. As course is nearing its end I'm quite pleased with the way it has turned out.

F6 I don't think I am particularly developed in it

F7 I think probably feeling a lot more confident than I did and feeling at home in the classroom with the students

F8 building relationships with the students

F9 Students have enjoyed the lessons and have made progress

FN3 Working in excess of 60 hours per week to ensure good provision for students, good relationships with staff and students

Primary Education

P2 Developing and coping better with children who have behavioural problems

P3 Helping the EOL children - about eighteen languages in this class

P4 Seeing the strides that quite a few of the children have made

P6 Oh I don't know, I tend to be very self-critical, I'm good at making relationships with the children and in the staff room

P7 One boy Level 3 Special Needs suddenly made a breakthrough and was able to handle subtraction, something I'd said caused something to click in his mind.

In grouping the responses the following are of note:

- Four respondents in Further Education indirectly cited issues to do with student relationships
- Three respondents in Further Education gave examples to do with the delivery of their material
- Two respondents in Further Education were not able to give specific examples
- One respondent in Further Education cited increased confidence
- Four respondents in Primary Education cited pupil progress
- One respondent in Primary Education cited a relationship with a particular pupil

Q.4. *What do you consider to be your greatest failure/disappointment?*

Further Education

F1 Talking about other students in front of another student

F2 Lack of effort by the students

F5 Few topic areas, which I feel, could have been more finely tuned, or better planned

F6 I wasn't being reflective on how I was teaching and how I could get better

F7 Main disappointment is not being able to get a job. You can't put all that you've learned into practice without having a permanent job

F8 Odd lesson where I thought I'd planned them well and actually they hadn't worked

F9 Marking

FN3 Inability to deliver teaching and learning of the quality expected by students particularly in second term

Primary Education

P2 My inability to actually have the stamina to do it full time

P3 I've made a hash of guided reading

P4 Not being able to control the class as I would like

P6 I'm too laid back in the classroom, I'm too patient

P7 Greatest frustration is in not being able to get through to certain children, not able to motivate or interest them

In grouping the responses the following are of note:

- Four respondents in Further Education cited planning as a failure
- One respondent in Further Education cited marking
- One respondent in Further Education cited not being able to get a job
- One respondent in Further Education cited students' lack of effort
- Three respondents in Primary Education cited aspects of class management/control
- Two respondents in Primary Education cited own lack of ability
- One respondent in Primary Education cited lack of stamina to work full time

Q.5. *What vocal changes did you note during the term?*

Further Education

F1 Voice getting quite sore and strained, a bit delicate, voice got weaker because of being physically exhausted

F2 Tried to drop my voice lower and project it

F5 Like you have got a bit of phlegm at back of throat, voice usually sounds a bit muffled, becomes a bit more husky and slightly deeper as well

F6 I haven't been that conscious of my voice really, no

F7 I haven't noticed any actually

F8 I just feel that my voice has deepened, it feels a lot deeper and gruffer

F9 Voice seemed to be going OK but find my voice crackles an awful lot more and I just feel very dehydrated more quickly

FN3 Increased huskiness, voice loss

Primary Education

P2 It is certainly much lower a definite improvement

P3 I don't think I've noticed many, my voice got lower when I started and it's sort of stayed there now.

P4 My voice has got stronger, there is more depth in it

P6 My voice has definitely got lower I'm coughing more than I did, the volume's gone

P7 I lost my voice for two days

In grouping the responses the following are of note:

- Six respondents in Further Education cited vocal change
- Two respondents in Further Education cited no change
- Five respondents in Primary Education cited vocal change

Q.6. *Has the job measured up to your expectations?*

Further Education

F1 Yes

F2 I don't know sometimes I worry have I measured up to the job really

F5 Yes I would say on the whole it has

F6 Yes

F7 Looking at the classes that I'm doing now at the moment, yes

F8 In some ways yes, the disappointments are very much in the pressure of it

F9 Harder than I even thought it would be, all consuming

FN3 Absolutely not, most colleges are under-funded and chaotically managed and this has a detrimental effect on teacher morale

Primary Education

P2 I get a lot of satisfaction from it, disappointed with the professionalism of the teachers

P4 Found it really hard but if I can get to the end of it, I would feel myself that I'd achieved something

P6 I think it's harder work than I thought. Emotionally it tends to tire you because you are giving so much every day, less time for the family

P7 Sometimes, expectations I don't know, very sort of up and down emotionally

In grouping the responses, the following are of note:

- Five respondents in Further Education agreed that it met expectations
- Four respondents in Further Education had not found it met their expectations
- Three respondents in Primary Education agreed that it met expectations
- One respondent in Primary Education suggested that completion of the year would provide a sense of achievement

Q.7. If you had a wish list for the profession, what would it contain?

Further Education

F1 A creative approach and more short courses

F2 Increased respect for teaching

F5 More pay really, particularly in relation to sessional staff

F6 Fewer teaching hours, ongoing reflection, working with peers about how your teaching is going

F7 More money in FE, more jobs

F8 A better understanding that it's not just the time that you spend in front of a class of students, there's a lot more in the background that you have to do

F9 More recognition and more money, moral support

FN3 Nationally recognised scheme for NQT's which should deal with standards, e.g. teaching hours, mentoring arrangements, progress review, budget for professional development of teachers

Primary Education

P2 We should be more accountable

P3 Twenty-four hour days

P4 More time, too much being pumped in all the time

P6 That people would trust teachers' professional judgement

P7 More money, more resources to deal with special needs

In grouping the responses the following are of note:

- Three respondents in Further Education cited increased recognition for teachers
- Two respondents in Further Education cited fewer teaching hours
- Two respondents in Further Education cited more pay
- One respondent in Further Education cited more creativity
- One respondent in Further Education cited increased respect
- One respondent in Further Education cited mentoring
- Two respondents in Primary Education cited lack of time
- One respondent in Primary Education cited more pay
- One respondent in Primary Education cited increased personal accountability
- One respondent in Primary Education cited increased trust in teachers' judgement

TERM 3

Q.1. *When you reflect on this first year post qualification, what have been the most significant professional issues for you?*

Further Education

F1 Looking for work and being positive in a rather barren job market

F2 Involvement or lack of by the college

F3 Bureaucracy. How to protect yourself and the students from the weakness of the system

F4 Discipline

F5 Issue of re-employment

F6 Is there a way that I can turn my teaching into a full-time profession? Finding work and thinking of future

F7 Fact that I can't get a job, applied for perhaps 48 jobs since qualified and haven't been successful

F8 Developing own skills in classroom. Fitting into a different kind of team

F9 Getting to know my colleagues, getting to know students, getting used to actual working routine. Organisation requirements. Making a good impression

FN1 Trying to work as part of a team. Identifying yourself with your colleagues. Getting to know students as individuals

FN2 Pressure of work. Keeping up with the work

<u>Primary Education</u>

P1 Make sure you talk to other people about any problems you have. Control of the children. Keep classroom tidy.

P2 Disappointed in the support given by other teachers

P3 Dealing with other members of staff, staff politics and getting ways of doing things that have been done for years

P4 Children's behaviour in the classroom

P5 Adjustment I had to make in terms of organisation for the Literacy Hour is probably the worst one

P6 Numeracy and Literacy Hours. Uncomfortable that curriculum is basically test-driven

P8 Not having a really good relationship with the Headteacher

<u>In grouping the responses, the following are of note:</u>

- Four respondents in Further Education cited issues of employment or un-employment
- Two respondents in Further Education cited getting to know students and colleagues
- Two respondents in Further Education cited being part of a team
- One respondent in Further Education cited the development of classroom skills

- One respondent in Further Education cited bureaucracy

- One respondent in Further Education cited lack of involvement by the college, i.e. senior management

- One respondent in Further Education cited problems of discipline

- Four respondents in Primary Education cited relationship issues

- One respondent in Primary Education cited children's behaviour

- One respondent in Primary Education cited organisation

One respondent in Primary Education cited curriculum issues

Q.2. *Do you now feel secure in your professional identity?*

<u>Further Education</u>

F1 Trying to become more secure in myself

F2 No I have to say no

F3 Yes I think I am a professional

F5 Certainly confident in role of a lecturer in Further Education. No doubts about my own abilities

F7 I feel confident about the fact that I can teach and I feel quite happy in front of a class

F8 Secure in the setting

F9 Secure, definitely more secure

FN1 I feel fairly confident saying I'm a teacher – tend to say ' Oh I do a bit of teaching' feel happy identifying myself as a teacher

FN2 More secure than I did probably even half a term ago. I feel very very junior

<u>Primary Education</u>

P1 No, not after this year, no

P2 No I still keep thinking, 'Am I really a teacher?'

P3 Yes. I do feel more of a teacher

P4 I wouldn't say secure. Need that little bit more confidence

P5 Yes I think so. More confident

P6 I still don't feel like a real teacher

P7 Definitely. Parents accept me as a teacher

P8 No, my confidence has been knocked for six, really because of the way I have been treated and my self-confidence within teaching is not what it should be really

In grouping the responses, the following are of note:

- Seven respondents in Further Education responded affirmatively
- One respondent in Further Education was still not quite secure
- One respondent in Further Education responded negatively
- Five respondents in Primary Education responded negatively
- Three respondents in Primary Education responded affirmatively

Q.3. *Could your training have better prepared you in any way; if so, how/what were the most and least useful aspects of your training?*

Further Education

F3 It has been very useful and it's been good

F4 More teaching practice would have helped, more focus on discipline

F5 Not so much the training – more emphasis on where you stand with employment rights and where you stand as a sessional lecturer. PGCE course at Greenwich is particularly finely tuned. In tune with what is going on out there

F6 I'm not sure really … one of the things I found difficult … was how much we were thrown into a very difficult situation at the college that I was doing my placement at. More stuff on finding work. Most useful experience of teaching least useful some of the sort of psychology we did

F8 Only criticism I had when I started was the reality of teaching or the job situation. Prepared well for lessons, learning style all of that kind of thing.

F9 Other PGCEs do more specialist teaching practice and I think they get the specialist knowledge we didn't concentrate on much at Greenwich. Work we did on actual teaching was good

FN1 Teaching practice, Greenwich prepared me well for the kind of structure of FE now. I found a lot of the lectures not particularly helpful tended to be a bit shallow

FN2 Least useful all the essay writing, we needed more teaching practice, more practical help

Primary Education

P1 Most useful were those where we actually went through different things in the classroom, how the classroom should be set up and one or two subjects we were actually taught and given an idea about how to teach subjects. Least useful aspects really were IT and various subjects where we were just given sheets of paper to read through and interpret..there was very little practical

P2 Yes I think that a lot of it was too academic and not enough hands on. Most useful was planning, the least useful was the deep psychological training that we had on the psychology of childhood.

P3 The least useful was actually in our science training, the language training was the most useful stuff we did

P4 I think in a way behaviour issues weren't really covered as fully as perhaps they could've been ... in English everything is very general and nothing is really covered specifically

P5 Probably doing the dissertation was an awful lot of effort for not a lot of ... it didn't actually do a lot for classroom practice really. Teaching practice was the most useful

P6 Time in school is very useful ... things like learning how children learn

P7 The system doesn't allow for enough time in schools. There's probably too much theory and nowhere near enough practice, the most useful was the practical work in schools and the least useful ... some of the curriculum input at university wasn't very good

P8 History in education ... we could have done without that to be quite honest ... needed so much more help on the new Literacy strategy ... the English was probably the least useful

In grouping the responses the following are of note:

- Three respondents in Further Education cited teaching practice as most useful
- Two respondents in Further Education cited a desire for more information on work related issues such as employment rights or finding work

- Two respondents in Further Education felt confident in the preparation they received

- One respondent in Further Education found the lectures to be a bit shallow

- Five respondents in Primary Education found the time in school or teaching practice the most useful

- Two respondents in Primary Education found it too academic and not 'hands on' enough.

- One respondent in Primary Education cited the dissertation as of little practical use

Q. 4. *Voice is the teacher's most important professional tool. Would you agree with this or do you feel your voice has been of limited importance overall?*

<u>Further Education</u>

F1 Oh definitely

F2 I can agree with that I think teachers with quite an individual voice tend to get the best attention

F3 I really think that it's your only tool

F4 It's important, but one of several equally important factors

F5 Certainly among the most important tools, yes, I think I would say that it is the most important really

F6 I'm not sure about the most important tool but certainly ... important F7 I think your voice is very important because without your voice you wouldn't be able to do it

F8 I think it's been very important

F9 I think it's important in that without it you couldn't do the job. But no matter how good your voice control was if you weren't doing certain other things then you could be lousy – motivation and organisation is crucial

FN1 I think my voice is very important

<u>Primary Education</u>

P1 I think it is very important

P2 Very very important I wouldn't say it was THE most important but very very important

P3 I think my voice combined with my look

P4 I think the voice is important and I think mine has got stronger over the year

P5 I think it's been very important given the acoustic difficulties in that classroom, but even I found at times that my voice has not been good enough

P6 I think it's important

P7 The voice is very important. I can't imagine if my voice wasn't up to the job how I'd cope

P8 It's definitely the most important tool

In grouping the responses the following are of note:

- Four respondents in Further Education agreed with the comment

- Three respondents in Further Education agreed it was very important

- Three respondents in Further Education agreed that it was an important tool but not the most important

- Four respondents in Primary Education agreed that it was a very important tool

- Two respondents in Primary Education agreed that it was important but did not see it as the most important tool

- One respondent in Primary Education agreed it was the most important tool

- One respondent in Primary Education agreed voice, in combination with a look, was the most important tool

Q.5. *How effective was the voice care course in preparing you for the vocal demands of teaching?*

Further Education

F1 Oh it was very useful. Definitely. Yes

F2 I thought it was very useful

F3 It was imperative and I felt that

F4 A qualified success

F6 Oh yes I think it was good

F7 Oh I thought it was wonderful

F8 I think it gave me more awareness

F9 Useful, useful introduction, more instructional than a rigorous training

Primary Education

P1 I think it was effective

P2 It was very very effective. I picked up many tips that I've actually used

P3 It was good

P4 It did help me

P5 I think it would have been very effective only when you can't do it all

P6 I think it was very important ... mainly because it raised awareness

P7 It was effective in as much as it made me more aware.

P8 ... was very very useful

In grouping the responses the following are of note:

- Seven respondents in Further Education found it effective or useful or important

- One respondent in Further Education found it a 'qualified success' (quote marks researcher's own)

- Eight respondents in Primary Education found it effective

Q.6. *Environmental factors are implicated in vocal disorders. Which have you been particularly aware of?*

Further Education

F1 Dust and debris

F2 The acoustics are dreadful

F3 All of them ... the college is disastrous, they don't think of air conditioning they don't think of acoustics, they don't think about the heat

F4 Dustiness dryness noise

F5 Temperature in the classrooms – usually well above a comfortable temperature level – air conditioning would be useful

F6 Size of the room ... definitely too big, building works going on outside, external noise wasn't helpful

F7 Lack of air conditioning

F8 Heating really, making it quite dry or quite hot, rooms just get very very stuffy. Dust isn't a problem

F9 None particularly aware of

FN1 The room's often been too hot.

FN2 Dry rooms and rooms with bad acoustics

Primary Education

P1 Hot dry dusty areas

P2 I think heat noise and dust are the real problem areas

P3 My room ... it's got a huge ceiling, it's very hot in the summer ... its very dry in there

P4 I think I've been quite lucky with the classroom ... even when it's hot it's still fairly cool

P5 The noise levels in the classroom

P6 in terms of acoustics it's good

P7 ... sometimes it's very dry and quite dusty at times, ... not a particular problem unless I'm spending too long at the blackboard and chalking and dust

P8 My biggest problem is the chalkboard really

In grouping the responses the following are of note:

- Five respondents in Further Education cited heating
- Three respondents in Further Education cited a lack of air conditioning
- Three respondents in Further Education cited dryness
- Three respondents in Further Education cited poor acoustics
- Two respondents in Further Education cited noise levels
- Two respondents in Further Education cited dust
- Three respondents in Primary Education cited heat
- Three respondents in Primary Education cited dryness
- Three respondents in Primary Education cited dust
- Two respondents in Primary Education cited noise
- Two respondents in Primary Education cited chalk dust

Q. 7. *How many sessions have you spent teaching?*

Further Education

F1 Well it was sort of full on when I did do it

F2 From October to February five one-and-a-half hour sessions

F3 Four or five sessions

F4 Full time for the first half term

F5 Eight sessions a week and these can be an hour and a quarter or three hours or three and a quarter

F6 One

F7 On average between 20 and 26 hours. At the moment I am doing 30 to 33 hours (in four places)

F8 Twelve sessions an hour and a half a session

F9 75 per cent of the full timetable ... full timetable is 23-and-a-half hours approx

FN2 Twenty-one-and-a-half hours

FN1 Three sessions (five-and-a-half hours)

Primary Education

P1 Full time first term and next half term, regular supply since Easter

P2 Twelve

P3 Twenty

P4 One hundred percent

P5 Six sessions over all three terms

P6 Full time

P8 Full time

P7 All of them

In grouping the responses the following are of note:

- Three respondents in Further Education cited full time work (18 hours per week)
- Two respondents in Further Education cited between one and three sessions
- Two respondents in Further Education cited between four and five sessions
- Two respondents in Further Education cited between eight and twelve sessions
- One respondent in Further Education cited working 75 per cent
- Six respondents in Primary Education cited full-time work
- One respondent in Primary Education cited twelve sessions
- One respondent in Primary Education cited six sessions

Q. 8. *Was this whole class teaching, small group work, presentation or a mixture of all these?*

Further Education

F1 A mixture but mainly whole group work at the beginning of the week then one or two days would be more individual

F2 Younger classes was a bit teaching by rote, the older groups would really enjoy getting into groups

F3 Mainly class teaching and group work

F4 Mostly whole class teaching

F5 Whole class teaching

F6 Whole class

F7 A mixture but mostly class teaching

F8 A bit of a mix, whole class teaching finished, then the last three to four weeks of term a lot of it was workshops and tutorials

F9 Mostly whole but one-to-one as well

FN1 Whole class

FN2 Whole class

Primary Education

P1 Whole class teaching

P2 A real mix

P3 90 per cent is whole class teaching

P4 Whole class

P5 Whole class teaching

P6 All whole class teaching

P7 Generally whole class

P8 All whole class teaching

In grouping the responses the following are of note:

- Eleven respondents in Further Education cited whole class teaching
- Four of the eleven respondents in Further Education qualified this by citing different student groupings for some lessons

- Eight respondents in Primary Education cited whole class teaching
- Two of the eight respondents in Primary Education qualified this by citing different student groupings for some lessons

Q. 9. *For how much of each session were you talking?*

<u>Further Education</u>

F1 Oh all the time

F2 I found myself talking a lot

F3 Mostly I've found it's all the time

F4 Full on talk maybe nine-tenths of the lesson

F5 About two-fifths

F7 Most of it I'm talking all the time

F8 80 per cent of the time – sometimes 60 per cent of the time

F9 Difficult to say exactly

FN1 60 per cent

FN2 50 per cent up to 70 per cent

<u>Primary Education</u>

P1 Probably talking about half of the time

P2 Probably a good three-quarters of it

P3 Sort of 90 per cent at a time. Talk, talk, talk

P4 50 per cent whole class 50 per cent in groups

P5 All of it

P6 It depends but could be the entire time

P7 60 to 80 per cent of each session

P8 Probably a third of all sessions

<u>In grouping the responses the following are of note</u>

- Five respondents in Further Education talked for the entire session
- Four respondents in Further Education talked for between 40 and 80 per cent of the session
- One respondent in Further Education talked for 90 per cent of the session
- One respondent in Further Education was not able to identify the period

- Two respondents in Primary Education talked for the entire session

- Two respondents in Primary Education talked for between 60 and 80 per cent of the session

- Two respondents in Primary Education talked for 50 per cent of the session

- One respondent in Primary Education talked for 90 per cent of the session

- One respondent in Primary Education talked for 30 per cent of the session

Q. 10. *Was this generally at high volume or at a lower volume?*

Further Education

F1 At the beginning of the week or beginning of the day to sort of get everyone going quite high volume then nearer the end of the week more one-to-one

F2 Not too high volume

F3 I was trying not to over-use it by using a lower volume

F4 Whole class teaching high volume, going round individually low volume

F5 High volume

F6 Medium volume

F7 I try to keep it midway between high and low

F8 Lower volume really

F9 Low volume

FN1 Raised volume

FN2 Not too loud a normal level

Primary Education

P1 Mostly at a higher volume

P2 I would say half-and-half

P3 I'd say it was quite at a high volume

P4 A mixture really

P5 Quite high volume

P6 High volume

P7 Quite a bit at a higher level ... higher than conversational volume

P8 Tends to be a higher volume

In grouping the responses the following are of note:

- Four respondents in Further Education cited high volume
- Four respondents in Further Education cited a midway volume
- Three respondents in Further Education cited low volume
- Six respondents in Primary Education cited a high volume
- Two respondents in Primary Education cited a mixture of high and low volume
- No respondents in Primary Education cited a low volume

Q.11. *Would you now view them (major stress factors) in a different light?*

Further Education

F1 Yes, the management dealing with the other tutors and course leaders is most stressful

F2 The TOPS sheet

F3 ELS working patterns

F4 I was not aware of the amount of bureaucracy there

F5 No, not really, main pressure is incompetence of the team leader

F6 Most important ones were the amount of support (lack of) given by the Institution

F7 Limited support

F8 I think I view them differently, I know I can cope with them now

F9 Support this year has been very good. Taking time trying to be innovative in teaching methods

FN1 Limited amount of teaching had implications for the amount of stress experienced, noted paperwork and bureaucracy

FN2 Paperwork

Primary Education

P1 Stress from start to finish

P2 I think really that the pressure was greater than I'd expected, in fact it was overwhelming at times ... the pressure was relentless

P3 ... writing reports, it took me two hours per child (there are 27 children in this class) ... there aren't enough hours in the day

P4 No they're all there. A lot of stress is taking it all home as well, working every weekend

P5 I think you've got to be able to keep control of it all (pressure of work, limited support, too much paperwork) otherwise you won't survive

P6 I think there is huge pressure on people and I think it is stressful

P7 Ridiculous amount of paperwork and it takes me a very long time so I often find I don't get enough sleep

P8 No, not really. The major stress factors do make my throat hurt there's no doubt about that

In grouping the responses the following are of note:

- Two respondents in Further Education cited limited support

- Two respondents in Further Education cited bureaucracy

- One respondent in Further Education viewed the factors differently and now coped better

- One respondent in Further Education cited increased support

- One respondent in Further Education cited the incompetence of the management

- One respondent in Further Education cited ELS working practices

- Five respondents in Primary Education cited ongoing pressure and stress

- Three respondents in Primary Education cited the amount of paperwork

Q.12. *What coping strategies have you used to deal with these stress factors?*

Further Education

F1 Making sure I get away on my own somewhere even if it's just five minutes

F2 In my department the teachers have been really supportive

F3 Well sport, and I think what you need is a balance

F4 By not doing it (leaving teaching)

F5 Being sessional it doesn't particularly affect me

F6 Tried to develop informal contacts with the university, meditation, relaxation

F7 Well I'm too busy to think about it. I just cope, you know

F8 Plan more and plan my time

F9 Tend to get on with it, grit my teeth

FN1 I thought the stress was positive

FN2 Taken more free time, said no

Primary Education

P1 I've tried to reduce some of the time that you bring work home ... talk to colleagues

P2 I try to exercise ... I've tried to actually give myself some time out

P3 Generally I haven't ... I haven't coped very well at all. I let my joint disorder get really bad because school had to come first

P4 Just try to take everything as it comes up ... just take every day as it comes ... But there has been no mentorship really

P5 Go to bed early, shout at everybody when I get home

P6 I've got good friends that I can sound off at ... and also to make time for yourself

P7 I am very good at dealing with stress by just switching off whenever I can. I am very good at relaxing

P8 I take the Park Farm remedies ... going and sitting in the car and finding a bit of space ... bounce it off other people in school

In grouping the responses the following are of note:

- Three respondents in Further Education cited 'time out'
- Two respondents in Further Education cited support from colleagues/contacts
- One respondent in Further Education cited the stress as positive
- One respondent in Further Education left teaching to avoid the stress
- One respondent in Further Education cited increased planning
- Three respondents in Primary Education cited support from colleagues/contacts
- Three respondents in Primary Education cited 'time out'
- One respondent in Primary Education noted that she had not coped at all well

Q.13. *How have you changed and developed over the past year?*

Further Education

F1 More responsible about my appearance and how I see myself

F2 In teaching I'm more patient and I think I am getting a bit more of a professional identity with the students

F3 I've become tough, I've become more aggressive this year and I'm learning to relax more as well

F4 I've become a lot more cynical, I went in really idealistically

F5 I've organised myself better, just organisation and time management. Personally I don't think I've changed

F6 I'm in a better state than I was this time last year

F7 I feel a lot more confident perhaps, I've become a bit cynical

F9 Don't think I have changed much. I got used to things better and I've got better in doing them or more confident, don't think I personally have changed very much

FN1 I've become a little bit more resigned to things I'm not massively happy about

FN2 The job has made me demonstrate this certain stamina which I didn't know that I had

Primary Education

P1 I'm a bit more laid back than I was at the beginning of the year, priority now is for perhaps a couple of days, two or three days teaching might be enough (per week)

P2 I have tried to accept my own limitations ... I have not expected myself to be perfect

P3 I can't go out without looking at children as though they are going to misbehave ... I feel like I can do it (teach)

P4 I'm very tired ... I think I have gained confidence in what I've done even though I lost some on the way.

P5 I'm more confident definitely ... and I feel a lot older physically

P6 I think I'm more confident probably and possibly a bit more assertive

P7 I'm certainly more confident ... I've grown into the job to an extent ... but I'm certainly a much better teacher than I was in September

P8 I'm not so easy to walk over as I was, I'm trying to prioritise much more now

In grouping the responses the following are of note:
- Three respondents in Further Education cited increased confidence
- Two respondents in Further Education cited no change
- Two respondents in Further Education cited increased cynicism
- One respondent in Further Education cited increased aggression

- One respondent in Further Education cited increased professionalism

- One respondent in Further Education cited increased stamina

- Five respondents in Primary Education cited increased confidence

- Two respondents in Primary Education cited physical symptoms or tiredness/ageing

- One respondent in Primary Education cited increased acceptance of self

Q.14. *How much has the political climate compromised the teaching role?*

Further Education

F1 Only to say the jobs that are available. Seems more emphasis on just getting students on courses

F2 A lot. There seems a big gulf between teaching and management

F3 It compromises it quite a lot

F5 Hasn't really affected my particular college

F6 The biggest issue seems to be this contract work

F7 It's all about, colleges now are all about money and finance and everything revolves around that, it's more important than the students

F8 People are frustrated by the changes and the amount of paperwork generally, aware of the kind of battle between managers and teachers' course review files

F9 Added pressure in terms of accountability pressure to recruit students into FE

FN1 There's positive things to it and negative sides to it

FN2 They don't talk about teaching, they talk about targets, achieving targets and setting targets

Primary Education

P1You are now really pushing information on children at a high rate rather than spending your time teaching children

P2 I think parents' expectations are much higher ... I think they've lost their respect for teachers as well

P3 I tend to stay well out of it

P4 I think it's made it harder for the teacher ... they seem to be putting so much more on teachers and expecting them to cope with it

P5 ... You're railroaded in doing as the Government tells you and there isn't very much room for looking at a child's individual needs

P6 I think the biggest thing now is how prescriptive it is. It doesn't allow for any kind of creativity

P7 ... personally I like the structure

P8 I think they've compromised it totally, they just do not know that they are doing to the teaching profession.

In grouping the responses the following are of note:

- Two respondents in Further Education cited an increased focus on student recruitment

- Two respondents in Further Education cited tension between teaching and management

- Two respondents in Further Education viewed it with equanimity

- One respondent in Further Education cited the emphasis on targets

- Five respondents in Primary Education cited loss of teacher involvement in the teaching process

- One respondent in Primary Education cited parental expectation and lack of respect for teachers

- One respondent in Primary Education cited a liking for the structure

- One respondent in Primary Education cited a decision to 'stay out of it'

Q. 15. *What would you do differently if you were starting this year again?*

Further Education

F1 Well I really don't know. No it's gone all right

F2 More preparation

F3 I would most definitely discuss things before going into the situation and feeling sorry for myself

F4 It's been hard but I've learned a lot from it and I would never do it again

F5 Maybe organisation, just organising myself a bit better

F6 I would have either tried to do a lot more FE contract work or got another type of job full time straight away

F7 The courses that I took I may well do them differently – I would change the way I organise

F8 I don't think I would to be honest, I don't think I could have been better prepared

F9 Don't think there is an awful lot I could've done

FN1 I'm not sure I would do differently

FN2 I would negotiate my pay, I don't know if I would agree to teach five subjects

Primary Education

P1 I would probably I think in retrospect have done the whole year supply

P2 I would start as a part-time teacher I wouldn't even consider the sort of stress that a full-time teacher has

P3 I wouldn't shout so much at the children. I did tend to shout an awful lot, more than I would like

P4 I'd start by arranging my room a bit differently. I think my record keeping needs to be a bit more tighter.

P5 If I could've found a job share that wasn't where I lived I think I would do that

P6 I think first of all you've got to establish rules very quickly and my classroom organisation

P7 Much more, much better discipline

P8 I wouldn't accept the job here … really I made the wrong decision at the beginning

In grouping the responses the following are of note:

- Four respondents in Further Education cited no changes
- Four respondents in Further Education cited increased attention to detail regarding the content and conditions of the job
- Two respondents in Further Education cited increased organisation
- One respondent in Further Education cited increased planning
- Four of the respondents in Primary Education stated that they should not have accepted the job
- Three respondents in Primary Education cited aspects of class room organisation

Q.16. *What specific changes in your voice quality have you noticed during the year?*

Further Education

F1 I don't think it's changed a lot

F2 In all honesty I can't ... I feel I tried to consciously bring my voice a little bit lower

F3 I definitely speak quieter

F4 September and October it was up and down I occasionally lost it a bit while I was teaching. It seems to be more hoarse than it was a year ago

F5 Maybe it's become slightly deeper; my voice doesn't suffer from going hoarse; I don't have sore throats or anything like that

F6 I don't think I've noticed any in particular

F8 I think it's improved a bit more over the last term, generally I still think my voice is quite husky and I've made more of an effort to rise it up and change the sort of pitch a bit more. I've never lost my voice. I've really not had any major problem

F9 I haven't noticed any vocal changes

FN1 Not really anything

FN2 It's got stronger and more flexible. Talking one-to-one it feels sort of constricted

Primary Education

P1 One thing I've noticed is I can start saying things and the words don't come out and I have got quite husky and ... it's almost as though the voice is forced

P2 I think it's lower definitely lowered the tone of my voice

P3 By Christmas I felt that it had got a lot lower, now it doesn't sound any different I've got used to it being as it is

P4 I've had a cough all through the year ... I think it has got stronger

P5 I haven't noticed it over the course of the year but I think definitely there's a relationship between stress and voice quality or whether I can project my voice satisfactorily if I'm stressed and I can't if I'm stressed. There's obviously no doubt about that

P6 I cough a lot and I think I've got a slightly lower tone

P7 I haven't really been aware of any ... I lost my voice briefly but as far as I'm aware it's back to what it used to be

P8 It sounds throaty at times ... it is quite hoarse in comparison to what it used to be

In grouping the responses the following are of note:

- Four respondents in Further Education cited no voice change
- Two respondents in Further Education cited improved voice quality
- Two respondents in Further Education cited a husky voice quality
- Two respondents in Further Education cited a deeper voice quality
- One respondent in Further Education cited a quieter voice
- Three respondents in Primary Education cited a lower voice quality
- Two respondents in Primary Education cited a husky / hoarse voice quality
- Two respondents in Primary Education cited no voice change
- One respondent in Primary Education cited voice loss
- One respondent in Primary Education cited developing a stronger voice

Q. 17. *Making a comparison with your former career, can you identify the pluses and minuses of your new career?*

Further Education

F1 Before I had a degree and I was just doing bits and bobs, but now I can teach which is wonderful

F2 There is a lot of freedom, which is lovely

F3 I think there's a lot of development, you develop skills, social skills communication skills ... you are always learning

F4 Less flexibility, less responsibility, less pay, more people contact, you're never bored

F5 Minus, it's not a nine-to-five job you can never really shut off, bit of a thankless task teaching, hourly rate is not much more than if you were working at Sainsbury's

F6 Potential for some very meaningful work, a lot of scope for frustration, disappointment, badly paid

F7 I meet a lot more people than I did, I feel a lot more independent

F8 Challenge is a plus, minus is, you can't leave it at college, you take it home with you, I'm enjoying this more, I'm more involved, I think I made the right choice

F9 Haven't been bored for one minute in my new career

FN1 More responsibility, direct contact with the students, feel a sort of independence about what I'm doing

FN2 Stimulating, interesting, challenging, too much stress, too much work

Primary Education

P1 If everything went well you could have job satisfaction out of it but the minuses are that you haven't got the time to get job satisfaction out of it now. There's so much stress ... it doesn't stop like another job

P2 Definitely greater job satisfaction ... much less free time ... another thing is the awful pressure ... high expectations of other people of me now just because I have teacher label on me ... lack of money

P3 A definite minus is that you have them for longer and ... they don't always want to be there. You get a better relationship with the children

P4 Obviously there's more responsibility ... I do get job satisfaction ... paperwork is a minus

P5 I think it can be satisfying if you've got your own class ... but it's very difficult because it's nothing like any other job

P6 You are never bored ... and I think I am learning all the time, downside you get so incredibly tired and bogged down and it's all consuming because you give so much emotionally

P7 The job satisfaction in teaching far outweighs it (former work) there's just no comparison

P8 Pluses are I enjoy working with children ... every day is different

In grouping the responses, the following are of note:

- Seven of the respondents in Further Education cited an engagement/involvement with the job as a plus

- Three respondents in Further Education cited poor pay as a minus

- Three respondents in Further Education cited increased independence and freedom as a plus

- Two respondents in Further Education cited the inability to switch off from the job as a minus

- Five respondents in Primary Education cited job satisfaction as plus

- Three respondents in Primary Education cited pressure as a minus

- Two respondents in Primary Education cited involvement/lack of boredom as a plus

Q. 18. Will you still be in teaching in two years' time?

<u>Further Education</u>

F1 Well I hope so even if it is just a few weeks a year

F2 I don't think I'm patient enough to abide by the process

F3 If I can get a job yes

F4 I might

F5 Certainly in a year's time. In two years' time? Possibly yes

F6 There's a possibility

F7 I don't know, I'd like to be

F8 I hope so

F9 I think so yes I think so

FN1 I hope so

FN2 I hope so but I'm not definite

<u>Primary Education</u>

P1 I don't know

P2 Well I hope so ... but still part time

P3 Oh definitely ... 22 years' time I'll still be in teaching

P4 I hope so

P5 I don't know

P6 I like to think I would be

P7 Oh I think so yes

P8 Yes but not in the mainstream

<u>In grouping the responses, the following are of note:</u>

- Six respondents in Further Education responded affirmatively

- Four respondents in Further Education responded with probably

- One respondent in Further Education responded negatively

- Three respondents in Primary Education responded affirmatively
- Three respondents in Primary Education did not know
- Two respondents in Primary Education hoped to be

APPENDIX 14

APPENDIX 14

RESPONSES FROM THE VICTORIA INFIRMARY QUESTIONNAIRE

The following results from the Victoria Infirmary Questionnaire are shown here in order to offer a more detailed picture of the group, in particular factors which had a specific link to voice. Some factors which had a high response rate, but where a less direct link to voice could be shown are noted in the tables contained in chapter 6 but are not explicitly addressed here. For example, in the general health section, 16 of the respondents had been in hospital but they did not stipulate the reason for admittance. This high response was therefore not as significant as the lower response to the question 'Have you ever had difficulty hearing?' (Question 67), which had a response rate of four. Of the four who replied yes, two were respondents who experienced negative voice quality change during the year. In looking at these in more detail under the particular sections already delineated in Chapter 6, the following results were of note.

GENERAL HEALTH

Fifteen of the group had been in hospital

Seven of the group had had a hearing test

Four of the group had had difficulty hearing

It is to be regretted that no information was available as to the outcome of the hearing test or the reason for hospital admission.

PREVIOUS VOCAL HEALTH

Seventeen of the group had been hoarse or had lost their voice before

Fourteen of the group who experienced hoarseness or loss of voice, noted that the voice returned gradually

Two of the group noted that their voice returned suddenly

Ten of the group noticed that the hoarseness was worse in the morning

Six of the group had lost their voice when trying to shout

Three of the group often had laryngitis

It was not possible to ascertain whether the laryngitis had been self-diagnosed or medically diagnosed.

CURRENT VOCAL HEALTH

Eighteen of the group agreed that their throat felt dry after using their voice a lot

Eleven of the group agreed that their throat often felt dry

Eleven of the group suffered from frequent nasal catarrh

Nine of the group often wanted to clear their throat

Nine of the group brought up catarrh when they coughed

Eleven of the group were short of breath

Six of the group ran out of breath at the end of sentences

VOICE CARE

Fifteen of the group said that they shouted

Fourteen of the group drank either beer or spirits

Twelve of the group drank mainly at weekends

Twelve of the group liked spicy foods

Five of the group smoked

None of the group often argued at work

VOCAL STATUS

Fourteen of the group reported that their voice was weak or hoarse after a night out

Eight of the group reported that their voice seemed very soft

Five of the group reported that their voice became weaker as they talked

ANXIETY AND STRESS

Nine of the group said they viewed themselves as tense people

Eight of the group said they worried unnecessarily

Nine of the group sat on the edge of their chairs instead of leaning back

Eight of the group reported that they were worried about their voice at times

It is to be regretted that the questionnaire design did not have any way of validating the truth of the responses. It is, however, of significance to note that some respondents perceived themselves to worry unnecessarily.

SOCIAL FUNCTIONING

Eleven of the group reported that they went out frequently

Thirteen of the group said they went out at weekends and during the week

Twelve of the group reported that if they go out they go to the country or to a friend's home for the evening.

Four of the group would go to a local pub or dance hall

OCCUPATIONAL

Seventeen of the group used their voice at home or at work during the day

None of the group responded positively to the question, 'Could you continue in your present employment if you lost your voice completely?'

ENVIRONMENTAL

Eighteen of the group had central heating at home or at work during the day

Fifteen of the group talked to people some distance from themselves

Six of the group worked in dusty conditions

Two of the group worked with chemicals