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# Self-Reported Voice Problems of Primary Music Specialists Teaching in South East Queensland

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Voice problems can have a significant effect on professional functioning for many occupations. In a number of published studies on voice disorders, teachers and singers emerge as sub-populations most at special risk. A recent research project that investigated "those occupations most common in the general population", identified teachers as the group "most at risk" of developing occupational voice disorders. Another study suggests that teachers of music are eight times more likely to seek voice treatment than others in the population. Despite this growing body of data, Queensland teacher education programmes appear to lack any systematic training framework incorporating specific voice management and training strategies. The purpose of this paper is to report on a comparative investigation of the literature as a basis for a self-report study on occupational voice disorders for South East Queensland teacher graduates who have completed a Bachelor of Education (Primary) with a music specialisation within the last five years.

## Introduction

Teachers are professional voice users. They place considerable demands on their vocal instrument as the critical resource of effective communication. They are required to talk extensively throughout a workday, often over background noise in environments that induce vocal misuse. As a consequence, voice problems and disorders are emerging as a significant occupational health issue for many of them.

Professional voice users have been defined as those "...for whom voice is a primary tool of trade" (Titze et al., 1997, p. 254). Titze estimated that teachers account for approximately one quarter of all professional voice-users in the U.S.A. European studies on occupational voice disorders appear to support these U.S. findings and underpin an assertion that teachers as a group are "most at risk" of developing occupational voice disorders (Verdolini & Ramig, 2001).

The combination of vocally-abusive, speech habits and hours of strenuous singing could actually increase the risk of voice disorders. Singing requires greater endurance than speaking as it necessitates accessing a more extensive vocal range and finer vocal control (e.g., wide pitch variations, sustained volume/loudness and access to a range of style-driven tonal qualities). Not surprisingly, Fritzell (1996) suggested that teachers of music are eight times more likely to seek voice treatment than other professional voice users in the general population.

In view of this growing body of research, our interest was drawn to Australian classroom teachers to see whether a similar incidence might apply. We could find no national studies, and more specifically no Queensland-based studies, on the prevalence of occupational voice disorders amongst classroom and/or music specialist teachers. However, in a study of classroom teachers in South Australia, Russell, Oates and Greenwood (1997) reported on data collected from a random sample of full-time teachers working in the State School system (pre-school, primary and secondary school) and compared responses to a self-report questionnaire from a random sample in the general population of the State.

Teachers in the sample were asked to report voice problems for: 1) the day of the survey, 2) the current teaching year and 3) their careers. The results of this survey indicated that "...up to 22% of teachers experience regular voice problems that interfere with their ability to use their voices as they wish.". Interestingly, Russell et al. noted that teachers appeared reluctant to seek treatment [for voice problems] from health professionals and concluded that:

This reluctance to seek professional help suggests that teachers view voice problems as an occupational hazard... (Russell et al., 1998; p. 8).

The current research was instigated in response to a gap in the literature relating to specific studies of the prevalence of voice disorders in the Queensland teacher population. This paper reports on results from a pilot study of self-reported voice problems of primary music specialists teaching in South East Queensland who had completed a Bachelor of Education (Primary), within the last five years.

### **Participants and method**

All respondents were teachers with a music specialisation who were teaching 30 or more classes per week. One listed teaching 45 classes per week. Each teacher was involved in extracurricular music activities including directing choirs and ensembles in addition to general classroom teaching. The time allocated each week for these additional activities ranged from 1 hour (2 teachers) to more than 4 hours (4 teachers). Most were engaged for about 2 hours (8 teachers).

We wanted to know about teachers' perceptions of the vocal demands of classroom teaching, the occurrence of any vocal health problems, and the impact of these voice problems on their ability to perform in a professional context.

A self-report questionnaire was designed and circulated by return post mailout to 15 teachers identified as constituting the target population on two criteria - South East Queensland teacher graduates who had completed a Bachelor of Education (Primary) with a music specialisation, within the last five years.

The questionnaire sought demographic information about respondents and answers in relation to our questions about their voice training, voice problems and vocal symptoms. Fourteen questionnaires were completed and returned.

## Results

### Demographic

All who responded were female ( $N = 14$ ). Ten were aged between 20–29 years; four were aged between 30–40 years. Seven respondents had 5 years of teaching experience, four had 3yrs, one had two years, and two had 1year.

### Prevalence of voice problems

All 14 respondents reported having had a voice problem during their teaching career that adversely affected their teaching; for eleven respondents this had happened in the current teaching year.

The incidence of voice problems encountered by respondents prior to, during and since teacher training can be seen in Table 1.

**Table 1**

Voice problems encountered by respondents prior to, during and since teacher training

QUESTIONS 5/6/7	HARDLY EVER	SOMETIMES	FREQUENTLY	TOTAL
<i>Voice problems prior to commencement of teacher training</i>	12	2		14
<i>Voice problems during teacher training</i>	8	6		14
<i>Voice problems since completing teacher training</i>	2	5	7	14

### Impact on teaching

One way to estimate the impact of a voice problem on a professional's work-life, is to examine the time taken for the problem to be resolved. In response to a question seeking such information, seven respondents reported "more than one day but less than a week". Two said that their voices "had not returned to normal". This, along with two others indicated an enduring problem. One of the other two indicated that her "voice is "on/off" all the time", and the other that, "I lost my voice for a week in the 3rd term of the first year of teaching."

Five respondents reported having voice problems *that prevented them from doing all they wanted to do with their voice* on the day of completing the questionnaire.

In response to a list of voice symptoms, "hoarseness or roughness of voice" rated highest with 13 respondents clustered around *always, often, or sometimes*. The second highest rating was for "strained voice" and "tired or weak voice" with 12 respondents clustered around *always, often, or sometimes*.

Additional comments offered by respondents included:

My voice often cut out, and was often deeper in tone and pitch.

My voice has "OK days", but generally I am good again after the holidays.

**Table 2**

Voice symptoms experienced by respondents that had negatively affected their teaching during the last 12 months

	1 ALWAYS, OR NEARLY	2 OFTEN	3 SOMETIMES	4 NOT VERY OFTEN	5 HARDLY EVER, OR NEVER
a. hoarseness or roughness of the voice	1	5	7	1	
b. lost your voice			4	3	7
c. severe dry throat	1	2	5	5	1
d. very sore throat		1	9	4	
e. laryngitis following a cold	1	2	2	3	6
f. strained voice	4	4	4	2	
g. tired or weak voice	2	8	2	2	
h. breathy-sounding voice	1	2	6	1	4
i. had to make an effort to talk after teaching	1	4	4	3	2
j. inability to achieve enough loudness or volume of the voice		5	4	4	1
k. unable to control vocal tone or quality of the voice		4	4	4	2
l. unable to control vocal pitch		2	6	2	4
m. excessive mucus, phlegm	2	3	3	3	3
n. physical tension – eg, neck, shoulders – that has affected your voice	1	2	5	5	1
o. emotional or mental stress that has affected your voice		1	7	2	4

In response to a question on the frequency of vocal fatigue, eight respondents reported experiencing it often. Thirteen gave some descriptive comments that were similar to those offered in Table 2. These were:

- Strained
- No enthusiasm
- I find it hard to keep having singing lessons
- Breathy, rough, hoarse
- Husky/little volume/dryness/pitch cracks
- Weak.
- Have trouble singing an entire song
- I can't sing or talk very loud
- Rough/raspy
- Unable to reach higher notes in range
- Cuts out at off moments.
- Deep
- Awful
- Voice Training

Only four respondents reported any training and in each case this had been for singing only. Yet, respondents generally commented that vocal health and training were important issues and that this research was necessary and welcome. Some of their related comments included:

Great idea to look at this issue.

This needs to be done.

It's great someone is doing something about this.

Good to hear about this.

## Conclusion

Analysis of the data from this pilot study confirmed our impression that music teachers have a very heavy speaking and singing voice load, and that it is not uncommon for this group of voice professionals to experience varying degrees of vocal fatigue and vocal dysfunction (Koufman and Blalock, 1988). Our data indicate high incidence rates and suggest that problems tend to arise once teachers begin the routine of daily teaching rather than during their teacher-education preparation. They also indicate that none of the practising teachers received (during or after their preparation), any training that might have assisted them in the prevention, recognition and/or dealing with vocal fatigue and dysfunction.

Fritzell (1996) emphasised that preventative voice care is more necessary in music teacher programmes than any other vocational education. A growing body of research data supports this expert opinion. Yet, our overview of Queensland's teacher education programmes reveals that they still lack any systematic training framework that incorporates specific strategies for voice management and voice training.

Teacher response to the pilot study appears to support Fritzell's assertions, and indicates a necessary and urgent need to develop a systematic, research-based, training framework for preservice and post graduate students in education, and specifically in music education, that focuses on sustainable vocal health.

The research literature in a number of fields indicates that curriculum and policy makers often develop programmes without consulting those who are "at the coalface" of their profession (e.g., in the schooling reform movement – Goetz, Floden & O'Day, 1995; in medicine, see discussion of communication weaknesses where patients are not involved in consultations and management plans – Burnard, 1992; Engel and Clarke, 1986). Before writing a programme of undergraduate and postgraduate coursework, the researchers plan to implement Stage 2 of this project, which will include an extensive survey of South East Queensland teacher graduates who have completed a Bachelor of Education (Primary) with a music specialisation within the last five years. Further research is planned to include secondary music teachers, teachers of singing and classroom teachers. This research will incorporate the development of specific management and training strategies for professional voice users (e.g., teacher – music, singing, physical education, early childhood, general classroom). Our goal is sustainable vocal health for teachers regardless of occupational vocal demand.

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