

Part C (Project Details)

Project Title: 教師聲線病患「計算器」: 減低教師患上聲線毛病的機會

Teacher Voice Risk Calculator: Reducing the Risk of Developing Voice Problems in Teachers

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Project Background

Prevalence data from the developed countries states that at least 50% of teachers have voice problems (e.g., Roy, Merrill, Thibeault, Gray, & Smith, 2004; Russell, Oates, & Greenwood, 1998; Simberg, Sala, Vehmas, & Laine, 2005; Williams, 2003). In Hong Kong, a recent survey (Chung & Chan, 2007) showed that 73.5% of teachers have voice problems. Indeed government statistics show that among all the voice patients seen in Government speech therapy clinics, 18% of them were teachers (Yiu and Ho, 1991). However, none of the training institutes for teachers has incorporated a course in vocal protection for teacher trainees in their curriculum. University of Hong Kong is the only university that has an optional module in voice training for teacher trainees. A healthy voice is essential for teachers at work. Studies have shown that voice problems can lower a teachers' job performance and quality of life (e.g., Smith, Gray, Dove, Kirchner, & Heras, 1997; Yiu & Ma, 2002). The problems affect not only teachers but can also affect students' learning progress and learning motivation (Morton & Watson, 2001). A number of risk factors believed to be associated with the development of voice problems in the teaching profession have been suggested in the literature but have never been systematically investigated in relation to the specific context of the teaching environment (Mattiske, Oates, & Greenwood, 1998). Given that the school setting, curriculum, teaching style and school environment in Hong Kong are unique, information on how these factors affect teachers' voice in Hong Kong will help to facilitate better prevention and to plan better management or intervention.

The objective of this project is to conduct a large-scale study on school teachers to *expand* and *validate* a general-purpose Voice Risk Calculator (Ho & Yiu, 2006, originally developed for the general public), for use specifically with the Hong Kong teaching profession. A further objective is to make use of the information on the risk factors to prevent and treat voice problems in the teaching profession.

Occupational risks for teachers' voice problems

A number of factors are associated with the high prevalence of voice problems in teachers. These include the teaching curriculum (subjects and grade level of teaching); the

acoustic environment; class size; health status of the upper respiratory track; smoking habit; personality and knowledge of voice care (Calas, Verhuist, Lecoq, Dalleas, & Seihean, 1989; Morton & Watson, 1998; Roy, Bless, & Heisey, 2000; Simberg et al., 2005). Among these, the teaching subject and grade level taught by the teacher are two of the most commonly reported risk factors (e.g., Preciado, Garcia, & Infante, 1998; Smith, Kirchner, Taylor, Hoffman, & Lemke, 1998; Thibeault, Merrill, Roy, Gray, & Smith, 2004). Teaching lower grades, physical education, chemical sciences, vocal music, drama and other performing arts are reported to put the teachers at higher risk of developing voice problems than teachers for other grades and subjects. It is believed that teachers in lower grades have to rely more on oral instructions rather than written communication, therefore increasing vocal demands during teaching. Physical education, vocal music, drama and other performing arts subjects also place a high demand on loud speaking during class. In addition, these classes usually take place in an open space, large classroom or theatre, which add an additional vocal demand because of the difficult acoustics environment.

A second core factor commonly identified in the literature is the noise level in schools. Teachers often have to speak loudly for a long period of time competing with a noisy environment and possibly in a poor acoustical environment, which leads to vocal abuse due to the high vocal demand (Preciado et al., 1998; Sapir, Keidar, & Mathers-Schmidt, 1993; Simberg et al., 2005). A poor acoustic environment not only affects teaching but also affects the learning efficiency of the students. Studies have shown that students, especially younger ones, have poorer speech comprehension in noisy environments when compared to quiet environments (Arnold & Canning, 1999; Nelson & Soli, 2000). A recent study that investigated the acoustic environment in Hong Kong primary schools showed that the acoustic environment was far from ideal for classroom learning (Choi & McPherson, 2005).

Impact of voice problems on the teaching profession

Voice problems can negatively affect teachers' health, quality of life and job performance. More than 20% of teachers in the study by Smith et al. (1997) reported that they missed work because of voice problems. A higher percentage was reported by Russell et al. (1998), who found 39% of their teachers missed at least one day of work per year. Smith et al. (1998) reported that 39% of their teachers had to reduce their teaching activity because of voice problems. This reduction in teaching activities results in financial loss in the education system. Teachers having voice problems also impose a cost on the health system. Sapir et al. (1993) reported that 14% of the teachers they studied sought medical treatment because of voice problems.

A recent survey in Hong Kong showed that 33% of the teachers who have taught for two years would experience voice problems and 21% of the teachers reported that they had taken more than 3 days off work annually because of voice problems (Chan, Yiu, & Ma, 2005). About 10% of them seek medical advice on an average of 2 occasions per year. Applying the 21% to the entire teaching force in Hong Kong (i.e., 14,111 out of a total of 67,196 teachers; Education & Manpower Bureau, 2005), and estimating an average of three days off work annually for each of the affected teachers, this would mean an approximately \$33 million annual loss in salary. The cost will become \$66 million if replacement teachers are to be employed to take over the sick teachers' duties. Applying the 10% to the Hong Kong teachers who would seek 2 medical treatment sessions for voice problems annually, this will at least cost over \$9.4 million each year (based on the standard consultation fee charged by the Hospital Authority in Year 2006, i.e., HKD 700 per session x 6720 teachers x 2 sessions). In sum, voice problems in teachers may cost Hong Kong society at least \$75 million annually. Given that most voice problems faced by teachers are preventable (Bistritsky & Frank, 1981; Chan, 1994), there is a need *to identify the teachers who are at risk of developing voice*

problems, and to develop an effective preventive program for reducing the economic burden in the local education and health system.

Our study has also shown that 89% of teachers expressed interest in attending a voice training workshop to help improving their voice use (Chan et al., 2005). However, few studies have investigated the effectiveness of these workshops in preventing voice problems in teachers. Chan (1994) investigated the effectiveness of a vocal hygiene education program for preventing voice problems in Hong Kong kindergarten teachers. It was found that the group of teachers who attended a voice workshop had less voice problems two months after the program when compared to a group that did not attend any voice workshop. This finding was supported by improvement in both perceptual and instrumental measurements of voice quality. Chan (1994) concluded that vocal hygiene workshops were effective for reducing voice problems in teachers.

Applicants' experience and other favourable factors in implementing projects

All investigators are members of the Centre for Communication Disorders, established within the Faculty of Education, HKU. All investigators are experienced in carrying out large-scale projects. Prof. Edwin Yiu is experienced in conducting large-scale voice treatment efficacy studies and has conducted survey on teachers' voice problems for the last 10 years in Hong Kong. He has also published extensively in the area of voice research and is the prime developer of the Voice Risk Calculator (Ho & Yiu, 2006). Dr. Karen Chan is experienced in conducting voice workshops and voice therapy for teachers. She has also coordinated large-scale research projects relating to voice problems. Together with Prof. Edwin Yiu, Dr. Chan published a book on voice care for teachers in 2003 (Yiu & Chan, 2003), and has launched a Teaching Voice Awareness Campaign that has targeted voice problems in teachers for the last 6 years. The project information has been disseminated at a local press conference (22 November 2005) and at various international conferences. Dr Estella Ma is experienced in developing voice assessment protocols and is the major author of the Voice Activity and Participation Profile (Ma & Yiu, 2001). Dr. McPherson specializes in hearing health assessment and environmental acoustic measurement. He has recently published reports on projects that investigated noise levels in Hong Kong classrooms, and the effectiveness of amplification systems used by teachers. This is a strong team with specialists in voice training, treatment efficacy, speech analysis and hearing assessment who cover all relevant areas of this project.

A key factor that affects the success and validity of this project is the collaboration with schools. Our team has a strong collaboration history and a close relationship with schools. With written support from 16 schools in the initial stage, this will ensure a good start and a smooth running of the project.

Project Objectives

This project aims:

- (i) To develop a Teacher Voice Risk Calculator to identify teachers who are at risk of voice problems
- (ii) To prevent and reduce voice problems in teachers by using appropriate strategies for inadequate classroom acoustics
- (iii) To prevent and reduce of voice problems in teachers by providing voice training workshop and internet resource support

Project Plan

The proposed project will consist of 5 phases over a period of 30 months. Phase 1 aims to investigate the risk factors for Hong Kong teachers' voice problems by developing a

Teacher Voice Risk Calculator. It will involve teachers from different school settings completing questionnaires relating to their voice condition and the impact of their voice condition on their quality of life. The preliminary Teacher Voice Risk Calculator will be evaluated and refined using a larger sample size. Phase 2 will involve obtaining noise and acoustic measurements from the different school types across an academic year. Such measurements will be used to identify the impact of the acoustic environment on vocal health. Phase 3 will involve providing voice training workshops and resources over the internet for teachers to learn to protect and project the voice effectively for classroom teaching. The effectiveness of these workshops and internet resource support in reducing the occurrence and impact of voice problems will be evaluated against the teachers' voice conditions. Phases 4 and 5 will involve data analysis and dissemination of the results to the public.

Phase 1 ? Developing and validating the Teacher Voice Risk calculator

Targets and Expected Number of Beneficiaries

Teachers of 6 schools (approximately 100 teachers) who have agreed to collaborate will first benefit from participating in developing the Teacher Voice Risk Calculator. It is expected that 90% of the teachers will participate in this study. In the large scale validation process, it is estimated that 414 kindergartens and schools (20% of the total kindergartens (737), primary schools (759), secondary schools (519) and special schools (66)) will participate in the study. It is anticipated that 12,295 teachers from these institutions will participate.

Procedures

Developing the Teacher Voice Risk Calculator - A set of questionnaires (Appendix A), which includes basic vocal health information, job-related questions based on Chan et al. (2005), questions on possible teaching-related risk factors for developing voice problems; and the General Voice Risk Calculator (Ho & Yiu, 2006) will be completed via the internet.

The internal consistency, using Cronbach coefficient *alpha* (Litwin, 1995; McDowell & Newell, 1996), of the General Voice Risk Calculator will be determined to find the most appropriate items for the teaching population. Information from other questionnaires will be used to determine the additional specific risk factors related to teaching. These will be included as additional items, and together with the selected items from the General Voice Risk Calculator, a Preliminary Teacher Voice Risk Calculator will be developed.

Validation of the Teacher Voice Risk Calculator - All the participants will complete the questionnaires used in the Pilot Study and also the Preliminary Teacher Voice Risk Calculator developed in the Pilot Study. Furthermore, 2 standardized voice assessment tools and a personality assessment will be completed by the participants. They include the Voice Activity and Participation Profile (VAPP; Ma & Yiu, 2001), the Voice Symptom Scale (VoiSS; Deary, Wilson, Carding, & MacKenzie, 2003; Wilson et al., 2004) and selected scales from the Cross-Cultural (Chinese) Personality Assessment Inventory-2 (CPAI-2; Cheung, Leung, Song, & Zhang, 2001; Cheung, Leung, Zhang, Sun, Gan, Song, & Xie, 2001). These will be used to validate the Teacher Voice Risk Calculator. An overview of these 3 tests is given below:

Voice Activity and Participation Profile (VAPP; Ma & Yiu, 2001). The VAPP will be used to measure the impact of voice problem on teachers' quality of life. It is a Hong Kong-based, validated self-assessing questionnaire that measures the participant self perceived voice impairment and impact of voice problem on his/her job, daily communication, social communication and emotion.

Voice Symptom Scale (VoiSS; Deary et al, 2003 ; Wilson et al., 2004). The VoiSS will be used to identify the communication and health-related symptoms that are associated with voice problems. It is a robust and validated self-reporting questionnaire on vocal symptoms.

Cross-Cultural Personality Assessment Inventory (CPAI-2; Cheung et al., 2001a, 2001b). The CPAI-2 will be used to investigate the personality traits, anxiety and depression levels expressed in teachers. The CPAI-2 is a validated and standardized personality test that is specifically designed for the Chinese population. Subscales from the CPAI-2 will be selected for the use in this project. The selected subscales have been shown by Cheung et al. (2001) to represent neuroticism and extraversion, which have been associated with voice problems (Roy et al., 2000). The CPAI-2 clinical scales on anxiety and depression will also be included, as Roy et al. (2000) have shown that teachers with voice problems are associated with higher anxiety and depression levels than those without voice problems.

Upon completion of the tests, the participants will be informed of their scores with reference to normative data or severity scales. General guidelines on voice care and referral services for voice therapy will also be given to participants who reported voice problems. It is expected that these measures will attract those with voice problems to participate in Phase 2 of the project.

Evaluation

The deliverable outcome, i.e., the Teacher Voice Risk Calculator will be evaluated for validity and reliability using the 3 standardized tests described.

Phase 2- Measuring classroom acoustics in schools

Targets and Expected Number of Beneficiaries

Eighty schools will benefit from this phase of project. Acoustic measurements will be taken from classrooms in 20 schools from each sector (i.e., kindergartens, primary schools, secondary schools, special schools). These schools will be randomly selected from the participating institutions and will be stratified across the 18 districts in Hong Kong.

Procedures

Acoustic measurements will be taken from four classrooms in each kindergarten and twelve classrooms in each primary, secondary and special school. The kindergarten measurements will be taken in a lower grade (nursery or K1) and a higher grade class (K3) during a quiet and a noisy lesson (e.g., a story-telling versus a music lesson). The measurements from the primary and secondary schools will include measurements from a lower grade (P1-P3 or F1-F3) and a higher grade (P4-P6 or F4-F7) class during the following lessons: language, music, arts, science, humanities and physical education. The measurements will be taken twice from each institution, once during summer (when air-conditioners will be turned on or windows opened) and once during winter.

Two types of measurements will be collected. The first is a description of the acoustic facilities available in the classroom. The checklist of facilities is based on those suggested by Choi and McPherson (2005), and will include carpets, draperies, acoustic ceiling tiles, partitions, acoustical wall treatments, acoustically modified furniture and double-glazed windows. The second type of measurement will include the noise level during class, the speech levels of teachers (with and without amplifier), and the speech level of students. The noise and speech levels will be measured using a sound level meter, using a dB A-weighted scale.

Evaluation

The relevant acoustic treatment data obtained from the participants' schools will be compared to standards in other countries. Appropriate strategies to overcome the inadequate acoustics will be provided to the schools principals.

Phase 3 ? Developing and validating Voice Training Workshops

Targets and Expected Number of Beneficiaries

Two kindergartens, two primary schools, two secondary schools and two special schools will be randomly selected from the participating schools in the large scale validation of Phase 1. The teachers from these schools will be randomly assigned to either a control group or an experimental group (220 teachers per group, a total of 440 teachers). The control group will not attend any training workshops during the testing period, however, the training workshop will be provided after all the testing is completed. For the experimental group, voice training workshops will be provided during the testing period.

Voice Training Workshops

The voice training workshops will be delivered by a qualified speech therapist experienced in voice therapy. Each workshop will include information on how to protect the voice and short exercises on how to project the voice for classroom teaching. The content of the workshop will be based on the program and guidelines developed by Yiu and Ma (2001) and Yiu and Chan (2003). An outline of the voice workshop is included in Appendix B. In order to ensure that each participant has enough time to ask questions and practice the relaxation and vocal exercises, each workshop will only allow a maximum of 20 teachers. The workshops will be held at the beginning of the academic year (during August and September) in each participating school. Each workshop will be 3-hours long. Following the completion of the training workshops, the participants will be provided with internet support covering vocal exercises and information on vocal hygiene.

Evaluation

The effectiveness of the workshops will be evaluated by two methods. The first will be immediate written feedback from the teachers regarding their opinions on the relevance and effectiveness of the workshops (Appendix C). Secondly, the teachers' vocal health and quality will be evaluated by both objective acoustic measurements and subjective perceptual rating. Each teacher will be assessed before the training workshop (pre-training assessment), two months after the training workshop (post-training assessment) and at the end of the academic year (review assessment). This evaluation schedule will allow the monitoring of the workshop effectiveness in reducing voice problems over a school year. At each assessment, the teachers will first complete the Teacher Voice Risk Calculator developed in Phase 1. Those who show one or more vocal symptoms in the past week will be further assessed individually. The individual assessment will be carried out after school in a quiet room at the participating schools. Each assessment will include: 1) a recording of a voice range profile using the PhogTM System (Hitech Development); 2) a recording of a speech sample for acoustic measurement and perceptual rating of voice quality; and 3) completing a quality of life questionnaire ? VAPP (as described in Phase I). These instrumental and perceptual measurements have been shown to be valid and effective for measuring treatment outcomes in voice patients (Awan, 2001; Carding, Carlson, Epstein, Mathieson, & Shewell, 2000; Ma & Yiu, 2001; Sulter, Wit, Schutte, & Miller, 1994; Wolfe, Fitch, & Martin, 1997).

Phase 4 - Data analysis and report writing

All the data will be analyzed to determine the efficacy and efficiency of the tools developed in this project. Reports will be written up and recommendations will be drawn up.

Phase 5 ? Information dissemination

The Teacher Voice Risk Calculator and the Internet Voice Resource Centre will be available

to the public via the internet. The website will be maintained and managed by the Centre for Communication Disorders.

Information and publicity of the availability of the resources will be disseminated via press conferences, internet websites, seminars for schools, presentation at international, regional and local conferences and publications in local media and international journals.

Deliverable outcomes of this Project

1. A screening protocol for identifying risk factors associated with voice problems in teachers will be developed. This will be used for assisting teachers to eliminate or reduce these risk factors in daily environment.
2. Information on how to reduce the identified risk factors and materials on voice protection specifically designed for teachers will be available through a resource centre and a website maintained by the Centre for Communication Disorders, HKU.
3. A Press conference will be held to inform the public about the resources.
4. A manuscript based on the project will be submitted to an international, peer-reviewed journal.
5. Reprints or extracts of the reports together with the relevant voice protection information will be distributed to all schools in Hong Kong.

Sustainability of the Outcomes of the Project

1. The Internet Voice Resource Centre will be maintained by the Centre for Communication Disorders and will continue to operate after the termination of the Project. Teachers will continue to have access to the screening protocol and training resources via the internet.
2. It is expected that the prevalence of voice problems in teachers will be reduced in the long-run by:
 - i. Early identification of at-risk teachers;
 - ii. Provision of voice training for teachers;
 - iii. Implementation of school improvement recommendations suggested by the current project.

Proposed Implementation Schedule

| Duration | Phase | Action | Personnel |
|--|---------|---|--|
| First 12 months | Phase 1 | Preparation of materials (Invitation letters; School list) | - Research Assistant |
| | | Invitation to schools and confirming participants (Contacting principals through mails and phone calls) | - Research Assistant - Principals |
| | | Preparation Questionnaires for teachers | |
| | | Production of training resources (Handouts and materials for voice workshops) | |
| | | Distribution of questionnaires (<i>Target beneficiaries: 12,000 teachers</i>) | - Research Assistant - Principals - Teachers |
| First 24 months | Phase 2 | Preparation of materials (Acoustic equipment, acoustic checklist) | - Research Assistant |
| | | Acoustic measurement (obtain acoustic measurement from schools) (<i>Target beneficiaries: 80 schools</i>) | - Research Assistant |
| 13 th - 24 th months | Phase 3 | Baseline assessment (Individual voice assessment for teachers participating in voice workshops) (<i>Target beneficiaries: 440 teachers</i>) | - Research Assistant - Teachers |
| | | Provision of school-based voice training workshops (To conduct 14 training workshops) (<i>Target beneficiaries: 220 teachers</i>) | - Research Assistant - Teachers |
| | | Post-training assessment (<i>Target beneficiaries: 440 teachers</i>) | - Research Assistant - Teachers |
| | | Provision of school-based voice training workshops (To conduct 14 training workshops) (<i>Target beneficiaries: 220 teachers</i>) | - Research Assistant - Teachers |
| | | Review assessment (<i>Target beneficiaries: 440 teachers</i>) | 2 RAs |
| 25 th -27 th months | Phase 4 | Data analysis and report writing | - Research Assistant - Principal and co-investigators |
| 28 th -30 th months | Phase 5 | Information dissemination (press conferences; public seminars, media publicity, paper submission to international journals) | - Research Assistant - Principal and co-investigators |

Projected expenditure

| Item | Description | Cost (\$) |
|---|---|------------------|
| Salary | | |
| Research Assistant (full-time) | An experienced research assistant or a postdoctoral fellow with research experience and a clinical qualification in speech therapy is needed to coordinate and monitor the project plan, deliver voice training workshops, data analysis, preparation and dissemination of reports. Salary: (\$13000 per month + 5% MPF) X 30 months | 409,500 |
| Equipment | | |
| Bruel & Kjaer Sound level meters(SLM) (Model: 2239-A) | For measuring noise and sound levels in schools. As dedicated SLM are required for the whole project. These need to be bought specifically for this project. \$21,900/set | 21,900 |
| Notebook computer | A portable notebook computer with a professional grade external sound card for high quality recording of voice will be needed for recording the teachers' voices | 8,500 |
| and professional sound card | | 2,100 |
| Consumables | | |
| Photocopying | Invitation letters and data collection instructions: 3 pages X 2081 sets X \$0.3 Report reprints for all schools 3 pages X 2081 sets X \$0.3 | 3,746 |
| Envelopes | For sending invitation letters and reports: 2081 X \$1 X 2 + 5 (spare) | 4,167 |
| Postage | \$1.4 X 2081 X 2 | 5,827 |
| DVD-R | For data backup: \$10 X 100 | 1,000 |
| Day-to-day expense | Transportation cost for RA to travel to and from the research centre and schools for data collection (\$30 per day x 3 days/week x 104 weeks (24 months)) | 9,360 |
| Total (rounded) | | 466,100 |

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請在適當的格內，剔 (✓) 出你的答案

聲線狀況

- _____

聲線對工作的影響

11. 過往十二個月內，你因聲線問題而要請假的次數有多少天？
- ☐ 聲線有問題，但沒有請假 ☐ 一天 ☐ 兩天 ☐ 三天
- ☐ 四天 ☐ 五天
- ☐ 六天或以上，請列明：_____ 天
- ☐ 不適用，我的聲線沒問題

聲線護理常識

12. 你會否參加過一些聲線護理課程？
- ☐ 有 → 請答第 13 條
- ☐ 沒有 → 請答第 14 條
13. 參加聲線護理課程，對你的聲線問題或用聲技巧有幫助嗎？
- ☐ 有 ☐ 沒有 (答完請往第 15 條)
14. 你認為若果參加一些聲線護理課程，會否對你的聲線問題或用聲技巧有幫助呢？
- ☐ 會 ☐ 或許 ☐ 不會

任教資料

15. 你從事教學工作有多久？
- ☐ 不足一個月 ☐ 一年以下 ☐ 一年至四年 ☐ 五年至九年
- ☐ 十年至十四年 ☐ 十五年或以上
16. 你現在任教的級別是(可選擇多過一個答案)
- ☐ 幼兒班 ☐ 低班至高班 (K1-K3) ☐ 小一至小三 ☐ 小四至小六 ☐ 中一至中三 ☐ 中四至中五 ☐ 中六至中七
17. 每班的學生人數 _____
18. 你每星期需授課 _____ 天，每天 _____ 小時
19. 除授課外，你需要負責學生的課外活動嗎？ ☐ 不需要
- 需要，平均每星期 _____ 次，每次 _____ 小時
20. 你上課時有沒有用擴音器？
- ☐ 經常有 ☐ 間中有 ☐ 沒有

香港大學 言語及聽覺科學部

聲線病患風險量表

填寫問卷日期：_____ 年 _____ 月 _____ 日

請回答以下問題，在適當的格內，剔(√)出你的答案

聲線狀況

1. 你覺得自己現時的聲線有沒有問題？（註：「聲線問題」是指於任何時間你不能正常地運作你的聲線，聲線變得不正常，並且影響你與別人的溝通）

☐₁ 有

☐₂ 沒有

2. 你覺得現時聲線問題的有多嚴重？

☐₄ 很差

☐₃ 差

☐₂ 一般

☐₁ 好

☐₀ 很好

3. 在過往六個月內，你會怎樣形容你的聲線狀況？

☐₄ 很差

☐₃ 差

☐₂ 一般

☐₁ 好

☐₀ 很好

4. 在過往六個月內，你的聲線有沒有以下症狀？（可選多過一項）

☐₁ 喉乾

☐₂ 不夠氣

☐₃ 聲線沙啞

☐₄ 不能唱高音

☐₅ 不能唱低音

☐₆ 喉部痛楚

☐₇ 發聲失控

☐₈ 喉嚨痕癢

☐₉ 頻頻清喉嚨

☐₁₀ 喉嚨肌肉拉緊

☐₁₁ 走音

☐₁₂ 失聲

☐₁₃ 聲線柔弱

☐₁₄ 不能細聲說話

☐₁₅ 喉嚨肌肉疲倦

☐₁₆ 不能大聲說話

☐₁₇ 其他：_____

☐₁₈ 不適用，我的聲線沒有以上症狀

聲線用量

5. 你有接受過唱歌 / 聲線訓練 / 聲線護理課程嗎？

☐₁ 有 → 請答第 6 條

☐₂ 沒有 → 請答第 7 條

6. 你有接受過 _____ 唱歌 / 聲線訓練 / 聲線護理 _____ 訓練
每星期 _____ 次，每次 _____ 分鐘

7. 你有以下的嗜好嗎？(請刪去不適用)

☐₁ 吸煙 (每日 / 星期 _____ 支) ☐₂ 飲咖啡 / 濃茶 (每日 _____ 杯)

☐₃ 飲酒 (每日 / 星期 _____ 杯) ☐₄ 長時間唱歌 / 唱卡拉 OK (每日 / 星期 _____ 小時)

☐₅ 打麻雀時談天 ☐₆ 在酒樓時談天

☐₇ 長時間傾電話 (每日 / 星期 _____ 小時)

☐₈ 喜歡吃一些刺激性食物或飲品，如：煎炸、太乾、太甜或太辣的食物

☐₉ 以上都不適用

8. 你有以下的習慣嗎？

☐₁ 說話急速 ☐₂ 大力說話 ☐₃ 太大聲、細聲說話 ☐₄ 太高

音、低音說話

☐₅ 用氣聲說話 ☐₆ 放縱地大笑 ☐₇ 清喉嚨、大力咳嗽 ☐₈ 身體

用力時大聲呼喝

☐₉ 生活緊張 ☐₁₀ 激動地說話 ☐₁₁ 沒有充足睡眠

☐₁₂ 在傷風，喉嚨發炎時長時間說話 ☐₁₃ 在寒冷及乾燥的天氣仍用口呼吸

☐₁₄ 以上都不適用

9. 你每天飲 _____ 杯水

10. 你每 _____ 小時飲一次水

11. 聲線出現毛病時，你會

- ☐₁ 減少說話 ☐₂ 多飲水 ☐₃ 諮詢耳鼻喉專科 ☐₄ 諮詢言語治療師
☐₅ 請病假 ☐₆ 其他(請註明) _____
☐ 以上都不適用

12. 你會否因聲線出現毛病而需要接受聲線治療？

- ☐₁ 有 → 請答第 13 條
☐₂ 沒有 → 請答第 14 條

13. 你曾於_____年_____月開始接受_____個月聲線治療

有關工作需求的用聲習慣

14. 你現在的工作是_____，從事了_____年。

15. 請列出以往的職業

_____ 工作，從事了_____年
 _____ 工作，從事了_____年
 _____ 工作，從事了_____年

16. 你工作時需要提高聲量嗎？

- ☐₀ 從不(0%) ☐₁ 很少(1-25%) ☐₂ 間中(26-50%) ☐₃ 經常(51-75%) ☐₄
 常常(76-100%)

17. 你工作時需要需要長時間說話嗎？

- ☐₀ 從不(0%) ☐₁ 很少(1-25%) ☐₂ 間中(26-50%) ☐₃ 經常(51-75%) ☐₄
 常常(76-100%)

18. 你工作時每星期需說話 _____ 天，每天說話 _____ 小時

19. 你工作時平均每次用聲的時間是 _____ 小時

20. 你工作時平均每次面對 _____ 人說話/用聲

21. 你工作時平均說話距離聽眾 _____ 米

22. 你工作時需要在空曠的環境下用聲嗎？

- ☐₀ 從不(0%) ☐₁ 很少(1-25%) ☐₂ 間中(26-50%) ☐₃ 經常(51-75%) ☐₄ 常常(76-100%)

23. 你工作時需要在嘈雜的環境下用聲嗎？

- ☐₀ 從不(0%) ☐₁ 很少(1-25%) ☐₂ 間中(26-50%) ☐₃ 經常(51-75%) ☐₄ 常常(76-100%)

24. 你工作 / 用聲環境有以下的隔音設備嗎？

- ☐₁ 隔音玻璃 ☐₂ 地氈 ☐₃ 松木壁佈板 ☐₄ 其他(請註明)

_____ ☐₅ 以上都不適用

25. 工作鄰近有沒有以下設施？

- ☐₁ 馬路 ☐₂ 建築地盤 ☐₃ 其他學校 ☐₄ 其他(請註明)

_____ ☐₅ 以上都不適用

26. 你工作時會開動空調嗎？

- ☐₀ 從不(0%) ☐₁ 很少(1-25%) ☐₂ 間中(26-50%) ☐₃ 經常(51-75%) ☐₄ 常常(76-100%)

27. 你工作用聲時會用擴音器嗎？

- ☐₀ 從不(0%) ☐₁ 很少(1-25%) ☐₂ 間中(26-50%) ☐₃ 經常(51-75%) ☐₄
常常(76-100%)

你平日工作以外的用聲習慣

28. 你平日說話需要提高聲量嗎？

- ☐₀ 從不(0%) ☐₁ 很少(1-25%) ☐₂ 間中(26-50%) ☐₃ 經常(51-75%) ☐₄
常常(76-100%)

29. 你平日需要長時間說話嗎？

- ☐₀ 從不(0%) ☐₁ 很少(1-25%) ☐₂ 間中(26-50%) ☐₃ 經常(51-75%) ☐₄
常常(76-100%)

30. 工作以外，你平均每天用聲_____小時

31. 你平日需要在嘈雜的環境下用聲嗎？

- ☐₀ 從不(0%) ☐₁ 很少(1-25%) ☐₂ 間中(26-50%) ☐₃ 經常(51-75%) ☐₄
常常(76-100%)

生理狀況

32. 在過往一年內，你經常患病嗎？

- ☐₀ 從不(0%) ☐₁ 很少(1-25%) ☐₂ 間中(26-50%) ☐₃ 經常(51-75%) ☐₄
常常(76-100%)

33. 在過往六個月內，你有沒有患有聲線毛病？

- ☐₁ 有 _____ → 請答第 34 條
☐₂ 沒有 _____ → 請答第 38 條

34. 在過往一年內，你有沒有患有聲線毛病 _____ 次

35. 在過往一年內，你患有聲線毛病的模式

- ☐₁ 患病一次，歷時少於一星期
- ☐₂ 患病一次，歷時多於一星期
- ☐₃ 患病多次，歷時少於一星期
- ☐₄ 患病多次，歷時多於一星期
- ☐₅ 經常斷斷續續患有聲線毛病
- ☐₆ 長期患有聲線毛病
- ☐₇ 其他：

36. 在過往六個月內，你有沒有因為聲線問題而需要看耳、鼻、喉專科醫生？

- ☐₁ 有 —————→ 請答第 37 條
- ☐₂ 沒有 —————→ 請答第 41 條

37. 在過往六個月，如曾經內看過耳鼻喉專科，共看過多少次？

- ☐₁一次 ☐₂兩次 ☐₃三次 ☐₄四次 ☐₅五次或以上

38. 耳鼻喉專科的診斷結果

39. 耳鼻喉專科的治療

40. 看完醫生後，你的聲線狀況有沒有好轉？ ☐₁ 有 ☐₂ 沒有

41. 你過往有沒有接受過耳鼻喉手術? ☐₁ 有 (請註明) ☐₂ 沒有

42. 你有以下的呼吸導毛病嗎？

- ☐₁ 哮喘 ☐₂ 喉嚨感染 ☐₃ 鼻炎 ☐₄ 鼻竇炎
☐₅ 胃酸倒流 ☐₆ 經常傷風、感冒 ☐₇ 經常口乾、喉嚨乾
☐₈ 敏感 (請註明) _____ ☐₉ 喉嚨發炎
☐₁₀ 以上都不適用

43. 你有服用藥物嗎？

- ☐₁ 有 (藥物名稱) _____ 每天服食 _____ 次
 _____ 每天服食 _____ 次
 _____ 每天服食 _____ 次
☐₂ 沒有

個人資料

姓名： _____ (中文) _____
 _____ (英文)
 性別： ☐₁ 男 ☐₂ 女
 年齡： _____
 受僱狀況： ☐₁ 全職 ☐₂ 半職 ☐₃ 兼職
 婚姻狀況： ☐₁ 未婚 ☐₂ 已婚 ☐₃ 其他
 子女數目： _____ (如適用)
 兄弟姊妹數目： _____ (如適用)
 電郵地址： _____
 聯絡電話： _____

Appendix B: Voice Workshop Outline

Objectives:

- The participants will be able to describe how voice is produced
- The participants will be able to describe how to protect themselves from developing voice problems
- The participants will be able to carry out vocal muscular relaxation exercise

Content:

- Checklist of vocal abusive behaviours
- Voice production mechanism
- Common vocal pathologies and their treatment options
- Speaking and living habits that are beneficial for healthy voice production
- Breathing support exercise
- Laryngeal relaxation exercise
- Voice projection techniques and exercises
- Specific strategies and exercises on voice protection and projection in the teaching profession

Programme format:

- Seminar
- Group practice
- Question & Answer session with discussion

Speaker:

- 1 Speech Therapist

Duration:

- 3 hours

Appendix C: Workshop Evaluation Form

To enable us to get feedback and to improve future continuing education programs, we need your help in evaluating this seminar / workshop.

Use the scale:

0=Not applicable 1=Strongly disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree

Overall rating of session:

0 1 2 3 4 5

1. The seminar / workshop was useful to me
2. The content of the seminar/ workshop was stimulating intellectually
3. The content was relevant to work
4. The venue was appropriate
5. The duration was appropriate
6. Similar seminar / workshop is recommended to be held again

Which part of the seminar did you like most and why?

How could the seminar be improved?

Any suggestions on the content for future seminars?

Other comments:
