

Forgetting the audible body. Voice awareness in teacher education

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ABSTRACT

Voice training and voice knowledge have all but disappeared from Norwegian teacher education, in a general decline of the standing of practical-aesthetical subjects in compulsory school. Yet the voice is a teacher's primary tool for establishing authority, commanding attention, and for guiding, motivating and building a trusting relationship with students. Voice trouble is a major cause of health problems and professional dysfunction in teachers. In this article, "the audible body" denotes both voice physiology and the relational meanings that color production and perception of a human voice, within a matrix of social and cultural connotations of beauty, quality, normalcy and health.

The study consists of interviews with six music student teachers having received voice lessons during their three-year bachelor program, concerning voice awareness and voice care during studies and as student teachers in practice periods. The students were able to identify the relational authority and attention-producing qualities inherent in a well-functioning voice, and had learned to prevent and remedy common voice problems. Findings from the interviews are contrasted with previous survey data from a student group exposed to a minimal amount of voice education.

The article discusses the importance of teachers' awareness of physiological, relational and emotional influences on voice function, and of strategies for dealing with the challenges of being the audible center of pupils' attention, where pupils become the teacher's "magic mirror". The disappearance of voice training from teacher education conveys ignorance of the bodily and relational foundations of human functioning, and may negatively affect teachers' professional functioning.

Keywords: student teacher, the voice, the mirror-effect, self-censorship, voice shame

Introduction

The music subject in Norwegian compulsory school has traditionally been a subject with strong focus on singing activities (Nielsen, 1994), as reflected in previous curricula. Voice training was a compulsory part of the general program for every student teacher. For the music student teacher, individual or group singing lessons were mandatory. Since the 1970s, however, the music subject, as well as other arts-related subjects, have been reduced by approximately 20%. In 2017, singing is excluded from the general curriculum¹. This development could indicate a declining understanding of the importance of the human voice as a communicative tool for the teacher.

In this article, issues concerning the teacher's voice, and awareness of its functions and limitations are outlined from various angles, and discussed in relation to the lack of emphasis on the audible body in teacher education. We suggest "the audible body" as a concept that encompasses not only the sound of the voice, but also the communicative, relational and emotional meanings that inevitably color both production and perception of a human voice, within a complex matrix of social and cultural norms connoting beauty, quality, normalcy, health and more. By talking about "the audible body", not "the voice", we want to highlight that when people hear each other, or know they are being heard, they inevitably produce complex, tacit, normative interpretations not only of the sound, but of the person whose sound it is (Schei, 2011), and of the person's presentation of self (Goffman, 1959), given the norms inherent in the concrete context. Theoretical and practical implications of applying the concept of the audible body will hopefully become clearer throughout this article.

The article presents empirical data from qualitative interviews with six music student teachers who had participated in individual voice lessons. How these music student teachers describe functions of, threats to, and protective measures for the teacher's voice serves as a point of departure for a discussion of vocal health problems, voice shame and loss of authority in music teachers, important instances of negative effects caused by unawareness of the audible body in teacher education.

1 <https://www.udir.no/in-english/>

Literature on voice in teaching

“A professional voice user applies to any person whose profession/livelihood relies on the use of his voice.” (Wellens & Van Opstal, 2001: 82). Research within voice pedagogy (Beeman, 2017; Bovo, Galceran, Petruccelli & Hatzopoulos, 2007; López, Catena, Montes & Castillo, 2017; Schei, 1998; Tavares & Martins, 2007; Åvitsland, 2007), speech pathology (Bele, 2008: 233; Cutiva, Vogel & Burdorf, 2013; Simberg, 2004; Simberg, Laine, Sala & Rönnemaa, 2000; Simberg, Sala, Vehmas & Laine, 2005; Åhlander, Rydell & Löfqvist, 2011) and psychology (Kenny, 2011), indicates that professional voice users are susceptible to strain injuries of the voice, and that such injuries may cause long-term health problems and sick leave. Teachers have been singled out as particularly vulnerable to voice health problems. Teaching involves hours of voice use every day, and teachers depend on voice qualities and speech techniques that help pupils listen, concentrate, and digest the content and meaning of what is being conveyed. The inherent challenge of sustaining children’s prolonged attention to the teacher’s spoken word is often compounded by noise, bad acoustics and disturbance from the surroundings.

Wellens and Van Opstal (2001: 82) state that most teachers have not had “adequate training in voicing and articulation”. They argue that not only teachers, but also professionals within military service, coaches, lawyers and business people are at risk. Voice disorders are common among teachers world-wide, and teachers are overrepresented when it comes to voice problems warranting professional help. 20–80% of teachers report that they suffer from dry throat and “vocal fatigue” without having a cold, pain around the larynx, and cracking voice, writes Bele (2008: 46).

Up until now, surprisingly little attention has been paid to the importance of the teachers’ voice quality and voice capacity in communication research on the perspective of teaching effectiveness in class. This brings us to the fact that a teacher’s voice is of great importance in the imparting of knowledge perspective related to the learner’s ability to learn. (ibid.: 45)

Several studies support this view. Chen et al. compared Taiwanese teachers with and without voice problems, and found that voice disorders were correlated with upper respiratory infections, stress and anxiety (Chen, Chiang, Chung, Hsiao & Hsiao, 2010). Teachers with voice trouble reported less emotional stability, and lower levels of job satisfaction, communicative and social ability. The major symptoms in this study were hoarseness, low-pitch speaking voice and strain (Chen et al., 2010: 189). Voice

injuries can cause long periods of sick leave, emotional lability and muscle tensions, but often the voice is not identified as the point of departure (Åhlander et al., 2011).

Disproportionately tense breathing patterns cause painful tensions in the vocal cord muscles, the tongue, the neck and the jaw (Doscher, 1993). When muscles are tense and painful, the voice is disturbed, with a constrained timbre (Yiu, 2002). Psycho-motoric physiotherapy has documented that persistent tension over time leads to several disorders, often in the form of headache, back pain and withheld breath (Øvreberg & Andersen, 1986). In their study of patients' experiences with long-lasting musculo-skeletal and psychosomatic disorders, Sviland et al. confirm the interconnectedness of voice, body and mind (Sviland, Martinsen & Råheim, 2014: 616ff).

A teacher's mission is complex (Bovo et al., 2007). Teachers contribute to their pupils' learning of knowledge and skills, to cultural formation, and to the development of relational abilities and a resilient self. Teachers achieve this partly through the content of their speaking, singing, and performing, but even more through their tacitly perceived appearance as role models – their body language, relational behavior and display of emotion, all subtly interwoven with characteristics and qualities of the voice. Pupils mirror the teacher and copy voice use and details of body language. The pupils notice immediately not only the words, but unconsciously also timbre, volume, tempo and intensity (Schei, 1998). Lévêque et al. (2012) tested how the human voice affected learners' singing intonation, compared to a synthetic sound. Their hypothesis was that singing would be more in tune when the model was a human voice. They found that "the poor singers group" sang more accurately after listening to the human model, and that "the more participants had trouble with vocal accuracy, the more the human model helped them to improve their performance" (Lévêque et al., 2012: 295). These findings indicate a mirror effect whereby the listener unconsciously copies the speaker's voice, akin to the effects of mirror neurons in other fields of behavior, as documented by Gallese (2003). Research carried out as early as the 1860's characterized the larynx as "the seat of the living voice [...] The sound of an individual's voice was taken as a sign of his person and his personality as much as his appearance and his 'manner'", writes Hoegaerts (2015: 129) about parliamentarians in Britain in the 1880's. She elaborates the way politicians used their voice thoughtfully as an effective means for communication. The politicians were conscious of the power of a good voice, a timbre that made listeners able to both hear the content and enjoy the delivery of the message. According to Schmidt, Andrews and Cutcheon (1998: 434), pupils are "likely to spend 50% to 90% of their time listening to their teachers". For pupils who have a daily relationship with teachers over years, mirroring can have

vast effects. Several studies of student teachers show correlations between teachers' dysfunctional voices and their pupils' voice use, understanding and learning (Morton & Watson, 2001; Ohlsson, Andersson, Södersten, Simberg & Barregård, 2012; Rogerson & Dodd, 2005). Rogerson and Dodd find that "any form of vocal impairment is detrimental to children's speech processing" and influence the pupils' educational performance negatively (Rogerson & Dodd, 2005: 47). They state that the mandate of the teacher is impossible to fulfill without a well-functioning and enduring voice. "One of the main aims of teachers is to deliver knowledge: in doing this they use their voices as the primary tools of their trade" (ibid.).

As indicated above, our audible bodies reach out to others and are, like our visible features, tacitly evaluated against a backdrop of norms for quality, beauty and correctness (Goffman, 1967: 87, 95; Scheff, 2005; Schei, 2011). Hence, voice trouble in professional talkers may have serious consequences for self-respect, social functioning, and mental health. Nervousness and performance anxiety are well-known conditions among musicians, but also in teachers, who have to take a leader's position in class and on social arrangements (Papageorgi, Hallam & Welch, 2007). Voice trouble often leads to fear of public speaking (Marinho, de Medeiros, Gama & Teixeira, 2017) and voice shame, (Schei, 1998, 2011) which in turn may reinforce voice problems. A vicious circle can develop, where stress and anxiety impact on the voice and make the voice problems even worse, causing more embarrassment, and so on.

Steyn and Munro emphasize the relationship between voice, body and identity, stating that "Voice is thus always more or less, but never just, object or instrument" (Steyn & Munro, 2015: 109).

The interrelationship between body (and thus voice) and identity is indivisible during any act of communication. The self is manifested, reflected and communicated through voice. The relationship between the self, identity and voice is thus processually coordinated in relation to the cultural context within which it functions. (Steyn & Munro, 2015: 111)

Voice trouble in teachers can be prevented (Chen et al., 2010: 189). Based on several studies where teachers have received voice lessons and lectures to increase awareness of vocal fatigue and personal vocal limits, Bovo et al. (2007) conclude that "vocal education programs for teachers, which include correct voice use training and vocal hygiene, may prevent the emergence of these pathologies and stimulate teachers to seek medical assistance before the onset of the vicious circle of a vocal disorder"

(ibid.: 706). This is also stated by Rogerson and Dodd, who write that teachers' self-perception will benefit from voice care education (Rogerson & Dodd, 2005: 48), and Valtasaari (2017).

Despite such knowledge in the literature, the students' voice care in professional teacher education is decreasing. As the current Norwegian curriculum has no directives for voice training as such, a consequence is that institutions might not feel bound to offer voice classes to student teachers.

Method

In 2016–17, Åvitsland conducted semi-structured interviews with a strategic sample of six music student teachers of both genders at the department of music of a teacher education institution². The students were unknown to the authors. They had received fourteen to twenty 45-minute sessions of song-based voice training over the span of one to two years, and were judged by their voice teachers to be reflective and well-articulated, and hence well suited as informants in a qualitative study. Our research question was: What characterizes student teachers' voice use competence after two years of scant voice training?

The interview guide addressed the students' awareness of their own voice and its functions in teaching, as well as recalls of significant situations concerning voice, such as the first time they spoke or sang in front of an audience, and the bodily states and feelings connected with such experiences. The informants were also asked about tiredness in voice and body, and differences between the speaking and the singing voice.

All interviews were recorded and stored on private digital recording equipment, transcribed, analyzed, and thematically categorized according to standard analytic interview strategies (Brinkmann & Kvale, 2015). The interviews were summarized, and meaning condensation is used in the presentation of the informants' answers³. We have followed Malterud's descriptions of the thematic-analytical process, which implies reading, rereading, identifying and sorting meaning units, coding and

² The study is approved by the Norwegian Centre for Research Data (NSD) October 18th 2016.

³ The authors have presented excerpts from the interview study on the 46th Annual Symposium 2016: Care of the professional Voice, Philadelphia, USA.

condensing them, and lastly, synthesizing the interview material into meaningful descriptions (Malterud, 2012).

As a basis for judging what our informants had learned from their voice education, we have compared the interview findings with results from surveys that we previously had carried out among regular student teachers, who up until then had not received any formal voice education, and had no music education in the portfolio. We offered to these students, in groups of 20, a voluntary one-hour lesson in voice use and breathing awareness, at the end of which we asked the participants to complete a questionnaire about their professional voice experiences. The results of the survey have been published in Norwegian (Schei & Åvitsland, 2016). Since we used these results to develop analytical categories and questions for the present interview study, we repeat them in some detail here, as a backdrop for discussing the interview findings.

The 282 students who participated in the voluntary one-hour voice lesson during 2011–13, constituted 50% of their classes. All 282 (100%) completed the anonymous, descriptive questionnaire at the end of their lesson. We found that 96% had experienced fatigue or hoarseness in their voice, most frequently in connection with practice periods in schools, where they were deployed for 2 to 5 weeks every semester. More detailed results from the survey are presented in the discussion, particularly statements about situations where the students reported stress and tiredness in voice and body, connected with vocal utterances and self-staging.

In the following, the informants from our qualitative interviews are represented by the letters A, B, C, D, E and F.

Results: What do student teachers say about voice care?

All questions addressed in the result section are quotes from the interview guide. The results are presented without comments and analysis, which can be found in the discussion section. The three headings “Function: The voice as a tool for communication”, “Threats to the voice: Performance, emotion and acoustics” and “Protecting the voice” are the main categories developed through the analytical process.

Function: The voice as a tool for communication

What is the importance of the voice for you as a teacher?

Informant E states that the voice is the teacher's most important tool for good communication and dissemination of knowledge. A teacher has to be an authoritative person, but in a good way, and a good way is to use the voice without constraint, and communicate with the pupils in a focused manner, with the voice as a vehicle of relaxed authority. Informant E describes that he is satisfied with his own voice. It normally functions well when he stands in front of the class:

“I find my voice to be very even. I have never thought that I am too tired in the voice to go on, even when I teach music. In fact, I appreciate my voice. I even feel that I have a very clear voice. I have noticed during the practice periods in school that I do not have to put pressure on the voice to be heard. Compared with some of my classmates, who really sound as if they struggle with their timbre, my voice is neither too light, nor too dark, just right in the middle. I can just be who I am.”

Informant B says: “I think I have a carrying voice that lasts the whole day. I do not feel tired after a day in practice. I believe that the quality of my voice is of importance for the pupils. If my voice sounds bad, the pupils will not be able to concentrate.”

Informant F:

“As a teacher you have to control your voice. If you have hoarseness, you sound tired and that brings forth a negative atmosphere that definitely will affect the pupils. I believe that they copy the teacher's mood and timbre. They might also feel uncomfortable with the situation.”

When informant A was questioned what he might have written in the log if he had to write about his voice during the practice period, he replies:

“I would probably have written that I had used my voice in a bad way, where I unconsciously spoke too loudly without using the breath support sufficiently. I know that speaking loudly is not a good way to maintain a quiet and good classroom, because as a teacher you also convey voice use to the pupils. Speaking too slowly, fast or indistinctly will definitely influence their

concentration and ability to learn. The pupils will stop listening to the content and be more concerned with the *how* of the situation.”

Threats to the voice: Performance, emotion and acoustics

The informants identify the teacher’s situation as a complex performance in front of groups of pupils and others. They often experience nervousness, and describe that it influences the voice. Informant F says: “I speak faster and my voice tends to have a lighter timbre, the tongue feels dry and it is as if I don’t have enough time to formulate the sentences [when I’m nervous]”.

Informant E recalls situations where his voice was tired and describes the feelings: “It is as if the throat is dry and sore, the voice trembles, gets unstable, rough and fuzzy, as if I am using too much breath and get too little timbre on the voice”.

Informant C talks about how she can get exhausted in her voice after a long day if the pupils don’t listen and pay respect, if she teaches music, arts and craft, if the acoustic is challenging as in a gym class, or if she has taught a demanding lecture. This is how she describes being exhausted: “I feel my mouth is dry, and my throat is sore, I involuntarily lift my shoulders and I can feel that I am not breathing smoothly, nor am I relaxed in my body”. She adds that if she is to talk in front of an audience she gets tense in her voice. Her strategy is to engage the pupils in various tasks so that she might get to rest her voice.

Informant E says “It is worse to sing in front of 3 than 300”. He adds that he is conscious about breath support, breath awareness and the importance of vocal technique, but he is not satisfied with himself when he is singing in the tenor register, where he struggles to reach the highest notes. He knows what he should have done, namely focusing on his breathing and establishing a deep breath, instead of working with the voice from the throat.

Protecting the voice

“I have become more conscious of my voice use just because of my practice periods in school”, states informant A. “I know now that when I need to say something very loud, I have to use more power and use the darker timbre of my voice. The power comes from my stomach.”

Informant B has had singing lessons for two years, and learned to “breathe properly”, as he puts it. He notices a difference now, because he is more conscious about breathing, muscle use and the production of the actual sound, which must not be pushed. He thinks that most people are unaware of the functions and care of the teacher’s voice:

I think that not many people reflect upon their own voice use, but if they hear a voice that is unhealthy, they will notice. A teacher at my practice school had a very unpleasant voice. It was as if she was screaming and it was so uncomfortable to listen to. I don’t think that anyone had made her aware of it, but I believe that there is a negative effect. The pupils respond to her sound level by speaking the same way and I am sure that they will get tired, stressed and not able to concentrate. In such situations the muscles get tense, and concentrated listening is hard.

Informant B has made it a habit to warm up in the morning before teaching. “Yes, I warm up, and I have actually practiced ‘phonation in a pipeline’, and it functions very well!”⁴

He adds:

When I have spoken about healthy voice use to my friends, they don’t understand what I mean. They say: ‘What do you mean with voice use? There is nothing to say about that, is there?’ But when I tell details from my singing lessons and what I have learned, they say that they have never reflected upon the fact that so many elements matter if you are to sustain a healthy voice.

Discussion

The aim of the interview study was to deepen our understanding of how student teachers describe and reflect upon the functions, care and pedagogical effects of their professional voice, after a small number of regular voice lessons, as part of their education. In the discussion we will bring forth what kind of competence voice awareness might be, and in particular what characterizes the competence of these

4 ‘Fonation in a pipeline’ is a technique of blowing into a plastic pipe, 1 cm in diameter, to get breath connection. This technique helps when the breath is withheld or the throat muscles are stiff. The pipeline is stuck into a third-filled bottle of water, and one blows into the water and feels the resistance in the body.

music student teachers. We will discuss some of their statements and relate them to results from the first study conducted in 2011–13, as well as to international research about student teachers and voice (un)awareness and possibly negative effects of the audible body in teacher education.

In today's society little consideration is given to the audible body, whereas the visible aspects of people are awash in attention; to slimness and the need for exercise, or to fashion, styling and the indispensable products required to *be* the healthy body. The voice goes mostly unnoticed, as long as the voice user is healthy, without fatigue or hoarseness. As indicated by the literature, there is a general lack of awareness about the importance of the voice and its effects on listeners, among student teachers, teachers, and education authorities.

Addressing voice trouble

Over many years we have experienced that a large proportion of student teachers have inexpedient breathing patterns and insufficient voice control, with secondary effects such as headache, muscle tension and concentration difficulties. Some students do not regain their “normal” voice after a cold, but continue to talk as if they still have the cold, incorporating unhealthy voice habits that can be difficult and time consuming to unlearn. We learned from the survey of 282 student teachers in 2011–13 that 96% experienced fatigue or hoarseness, especially in connection with mandatory practice periods. One in five reported that this happened when they taught music and during activities such as choir singing, where there was an expectation that the student teacher should do warm-up exercises or lead the singing groups. The student teachers were expected to teach skills that they had not learned in their education. Their fatigue and hoarseness were consequences of not knowing how to sustain a healthy voice when giving instructions in crowded spaces with bad acoustics. Two thirds reported never having been taught anything about healthy breathing in connection with speech or singing. One student described how his practice teacher had demanded that he take better care of his voice and pay attention to his breathing pattern, which is a difficult task unless one has some knowledge of the connections between lack of breath support and hoarseness (Schei & Åvitsland, 2016).

In our survey, several students commented that when they increased the volume of the voice, often related to swimming lessons, arts and handcraft, or other situations with much noise or difficult acoustics, they became noticeably tired. Physical activities in big training halls, or outdoor activities, were characterized as challenging, and the

expected teacher's role was sometimes hard to live up to. When the school day was finished, they felt tired in the whole body. What we find interesting about these results is the fact that the student teachers manage to address so many details about voice trouble after only one hour of voice guidance. It might indicate that knowledge about the audible body is tacit and that such knowledge needs to be articulated in teacher education to make students aware of the consequences of bad vocal habits. Tendeland's research indicates that a focus on breathing may produce noticeable changes in voice use, and improvements of voice problems (2009: 3). Unhealthy breathing patterns may be caused by talking loudly in front of many people, or nervously singing a song, affect the timbre of the voice, the strength, the ability to speak or sing for a long time and the feeling of well-being in the body (Brown, 1996).

Findings from the survey also revealed that it is easy to talk oneself hoarse during choral instruction, with resulting fatigue. Chen et al. write that compensatory behavior, such as increased vocal loudness, "may further deteriorate a teacher's voice, ultimately decreasing a student's learning experience" (Chen et al., 2010: 188). One consequence of high pressure is to raise the voice and produce a light and pushed timbre. If students do not use the appropriate techniques in contexts with poor acoustics, or where strong voice is required, more pressure will be applied on the larynx, so that the voice quickly becomes fatigued (Boholm, 2013: 15; Kristiansen et al., 2014).

Even a minimum of voice care, like a few warm-up exercises in the morning, can have long-term effect (López et al., 2017). Adopting such strategies could help students thrive in the teaching profession. In accordance with Boholm (2013: 2) and others (Beeman, 2017; Kovacic, 2005; Willard, 2007), we would claim that in a time when there is an increasing prevalence of voice problems among teachers, voice training should be a separate subject in teacher education. Without knowledge about voice care and tools for self-healing, student teachers may experience hoarseness and fatigue when they are put under pressure, and develop chronic vocal health problems. Opera singers who perform night after night with controlled force, without fatigue or hoarseness, are good examples of professional voice users who, through purposeful practice, develop strong and resilient voices. Student teachers do not need that kind of practice to function as teachers, but they need to be made aware of and reflect upon the possibilities and limitations of the human voice. They also need to be aware of that which Rogerson and Dodd state: "In order to minimize the potential factor of reducing children's learning performance, educational authorities need to respond with voice care initiatives, either by undergraduate support or in-service training" (2005: 57).

Always on the podium

Voice trouble is often treated as purely biomechanical, but is clearly interconnected with social life, identity and emotion. When informant E describes that “it is worse to sing in front of 3 than 300”, he confirms what many researchers have stated; namely that “the other” matters. Though people rarely reflect on each other’s voices in everyday life, there are social norms of pitch, timbre, strain and rhythm. These tacit norms of sound and talk become salient when they are breached. A distorted voice raises immediate attention, so that interlocutors may find themselves listening more to the voice than to what is being said. In children, a teacher with a “funny” voice may cause concentration problems, unleash ridicule, and cause stigmatization of the teacher.

We tend to perceive ourselves as we think others see us. “The others” contribute with their presence as mirrors and judges, which might lead to over-attentive self-assessment and negative feelings about our self-staging, whether it is speaking in class or performing a song (Goffman, 1959; Salmon & Meyer, 1992; Sartre, 1992; Scheff, 2005).

When bringing forth “the other” in this discussion, the concept of shame is necessary to outline. Shame is rarely talked about in teacher education, but it is a basic, universal human emotion like joy, sorrow or anger (Scheff, 2003). It often manifests as embarrassment or self-censorship. Voice shame arises when a person becomes aware of the other’s attention to one’s “audible body”, and believes the evaluation to be negative (Schei, 2009: 233). When informant E states that the worst is to sing in front of three listeners, it is likely to be caused by a sense of being exposed to the other, a feeling of vulnerability, of auditive “nudity”. Shame manifests as feelings of wanting to disappear, shyness, not feeling well and sometimes anger for no apparent reason. The podium offers no place to hide, and every nervous move or crack in the voice can trigger feelings of discomfort. In human relationships “the other” will always be essential for self-esteem and well-being (Marinho et al., 2017.)

Informant B’s statement that “if my voice sounds bad, the pupils will not be able to concentrate” is insightful, and reveals experiences with how an unhealthy voice will be met by the pupils. He is not only aware of how an unhealthy voice sounds. He also describes how voice is intertwined with muscles and breath-support to be healthy and endure the daily pressure with loud talking and singing in class. The informant practices “phonation in a pipeline” (Costa, Costa, Oliveira, & Behlau, 2011; Titze & Laukkanen, 2007) on a regular basis to prevent voice injuries.

The voice conveys emotions – even if the voice user does not intend to (Scherer, 2003). To be fascinated or bored by a teacher might be a mirror effect of the emotions carried by the teacher’s use of her/his voice. A task for the student teacher, then, is to develop awareness of what is happening with the rest of the body when the voice is no longer an unconscious part of the whole. An important matter for student teachers in general is to learn to decipher what is conveyed – unintentionally – when a voice is unhealthy, whether it is her/his own voice or the voice of the pupil.

The informants considered the teacher’s voice to be important in communication with the pupils. The teaching relationship always concerns more than the verbal content. Layers of meaning are embedded in body language and movement. The sound of the teacher should ideally arouse confidence. If it evokes insecurity and irritation, something is amiss. This does not have to be consciously recognized – it is stored in the tacit knowledge the pupils have about their teacher. When informant E reflected about himself in the classroom he stated: “I can just be who I am” and he related it to his voice and how he was satisfied with the timbre of it, because it allowed him to *function as teacher*.

“[S]peakers were judged competent if they could move and engage their audience”, writes Hoegaert (2015: 125). She highlights vocal practices among politicians, and how such practices affect identity. Teachers, like politicians, usually are in the midst of attention. Being a professional voice user, teachers should know that good voice training can be learned, and breathing techniques automatized. Whether the voice is smooth, soft, hard or fuzzy, monotone or wide ranging, it has an effect on the listener. The listener stores the timbre, the rhythm and the unconscious associations evoked, in a complex impression of “the other”. These impressions become tacit knowledge that allows us to recognize familiar voices immediately; it affects moods, and influences our attitudes towards others.

The audible body is as important as the visible one, but the psychological mechanisms at work are less well understood. Insights about stage fright, performance anxiety and voice shame reveal how social psychological mechanisms hamper fluent breath, smooth voicing and relaxation of tensed muscles (Kenny, 2011; Salmon & Meyer, 1998; Schei, 2011).

Conclusion

The interviews with the six music student teachers who had received regular voice lessons during their bachelor program revealed that though they sometimes experienced voice fatigue and hoarseness during their practice periods, they were able to identify and remedy problems related to the voice. The informants could identify whether they had problems with the breath, muscle tensions, something anomalous with the timbre, nervousness, or soreness in the voice after loud speaking in bad acoustics, respectively. They also knew how they might work with various exercises to overcome their problems. This substantiates previous survey results, which revealed that even a minimal focus on breath support and awareness of healthy voice care could have a positive effect on student teachers' voices. Through voice awareness, the interviewees also revealed competence in their understandings of the voice as part of the whole human being, but whether they consider their voice as part of their *identity* as student teacher and as *becoming* teachers, is uncertain.

What we can state, is that the disappearance of voice training from teacher education reveals a regrettable oblivion of the bodily foundations of human functioning. In the case of professional voice users such as teachers, this oblivion threatens the quality of professional functioning, as well as the teachers' self-respect and health.

References

- Beeman, S. A. (2017). Perceptions of voice teachers regarding students' vocal behaviors during singing and speaking. *Journal of Voice*, 31(1), 111.e19–111.e28.
- Bele, I. V. (2008). The teacher's voice: Vocal training in teacher education. *Scandinavian Journal of Educational Research*, 52(1), 41–57.
- Boholm, M. (2013). *Hvordan opplever lærere å undervise i klassrom med dårlig akustikk?* (Master's thesis), Nord University, Bodø.
- Bovo, R., Galceran, M., Petruccelli, J. & Hatzopoulos, S. (2007). Vocal problems among teachers: Evaluation of a preventive voice program. *Journal of Voice*, 31(6), 697–706.
- Brinkmann, S. & Kvale, S. (2015). *InterViews: Learning the craft of qualitative research interviewing* (3rd ed.). Thousand Oaks, Calif.: Sage.
- Brown, O. (1996). *Discover your voice: How to develop healthy voice habits*. San Diego: Singular Pub. Group.

- Chen, S. H., Chiang, S.-C., Chung, Y.-M., Hsiao, L.-C. & Hsiao, T.-Y. (2010). Risk factors and effects of voice problems for teachers. *Journal of Voice*, 24(2), 183–192.
- Costa, C. B., Costa, L. H. C., Oliveira, G. & Behlau, M. (2011). Immediate effects of the phonation into a straw exercise. *Brazilian Journal of Otorhinolaryngology*, 77(4), 461–465.
- Cutiva, L. C. C., Vogel, I. & Burdorf, A. (2013). Voice disorders in teachers and their associations with work-related factors: A systematic review. *Journal of Communication Disorders*, 46(2), 143–155.
- Doscher, B. (1993). *The functional unity of the singing voice*: London: Scarecrow.
- Gallese, V. (2003). The roots of empathy: The shared manifold hypothesis and the neural basis of intersubjectivity. *Psychopathology*, 36(4), 171–180.
- Goffman, E. (1959). *The presentation of self in everyday life*. Garden City, N.Y.: Doubleday.
- Goffman, E. (1967). *Interaction rituals: Essays on face-to-face behavior*. New York: Anchor.
- Hoegaerts, J. (2015). Speaking like intelligent men: Vocal articulations of authority and identity in the House of Commons in the nineteenth century. *Radical History Review*, 2015(121), 123–144. <https://doi.org/10.1215/01636545-2800004>
- Kenny, D. T. (2011). *The psychology of music performance anxiety*. Oxford: Oxford University Press.
- Kovacic, G. (2005). Voice education in teacher training: an investigation into the knowledge about the voice and voice care in teacher-training students. *International Research and Pedagogy*, 31(2), 87–97. <https://doi.org/10.1080/02607470500127178>
- Kristiansen, J., Lund, S. P., Persson, R., Shibuya, H., Nielsen, P. M. & Scholz, M. (2014). A study of classroom acoustics and school teachers noise exposure, voice load and speaking time during teaching, and the effects on vocal and mental fatigue development. *International Archives of Occupational and Environmental Health*, 87(8), 851–860. <https://doi.org/10.1007/s00420-014-0927-8>
- Lévêque, Y., Giovanni, A. & Schön, D. (2012). Pitch-matching in poor singers: Human model advantage. *Journal of Voice*, 26(3), 293–298. <http://doi.org/10.1016/j.jvoice.2011.04.001>
- López, J. M., Catena, A., Montes, A. & Castillo, M. E. (2017). Effectiveness of a short voice training program for teachers: A preliminary study. *Journal of Voice*, 31(6), 697–706. <https://doi.org/10.1016/j.jvoice.2017.01.017>
- Malterud, K. (2012). Systematic text condensation: a strategy for qualitative analysis. *Scandinavian Journal of Public Health*, 40(8), 795–805.

- Marinho, A. C. F., de Medeiros, A. M., Gama, A. C. C. & Teixeira, L. C. (2017). Fear of public speaking: Perception of college students and correlates. *Journal of Voice*, 31(1), 127.e7–127.e11. <https://doi.org/10.1016/j.jvoice.2015.12.012>
- Morton, V. & Watson, D. R. (2001). The impact of impaired vocal quality on children's ability to process spoken language. *Logopedics Phoniatrics Vocology*, 26(1), 17–25.
- Nielsen, F. V. (1994). *Almen musikdidaktik*. København: Christian Ejler.
- Ohlsson, A.-C., Andersson, E. M., Södersten, M., Simberg, S. & Barregård, L. (2012). Prevalence of voice symptoms and risk factors in teacher students. *Journal of Voice*, 26(5), 629–634. <https://doi.org/10.1016/j.jvoice.2011.11.002>
- Papageorgi, I., Hallam, S. & Welch, G. F. (2007). A conceptual framework for understanding musical performance anxiety. *Research Studies in Music Education*, 28(1), 83–107.
- Rogerson, J. & Dodd, B. (2005). Is there an effect of dysphonic teachers' voices on children's processing of spoken language? *YMVJ Journal of Voice*, 19(1), 47–60.
- Salmon, P. & Meyer, R. G. (1992). *Notes from the green room: Coping with stress and anxiety in musical performance*. New York: Lexington Books.
- Sartre, J.-P. (1992). *Being and nothingness: An essay on phenomenological ontology*. New York: Washington Square.
- Scheff, T. J. (2003). Shame in self and society. *Symbolic Interaction*, 26(2), 239–262.
- Scheff, T. J. (2005). Looking-glass self: Goffman as symbolic interactionist. *Symbolic Interaction*, 28(2), 147–166. <https://doi.org/10.1525/si.2005.28.2.147>
- Schei, T. B. (1998). *Stemmeskam: hemmede stemmeuttrykks fenomenologi, arkeologi og potensielle rekonstruksjon gjennom sangpedagogikk*. (Master's thesis), Bergen University College, Bergen.
- Schei, T. B. (2009). "Identitation" – Researching identity processes of professional singers from a discourse-theoretical perspective. In F. V. Nielsen, S.-E. Holgersen & S. G. Nielsen (Eds.) *Nordic Research in Music Education. Yearbook Vol. 11* (pp. 221–236). NMH-publikasjoner 2009:8. Oslo: Norges musikkhøgskole.
- Schei, T. B. (2011). Kan stemmeskam overvinnes? Om helsefremmende aspekter ved profesjonelle sangeres identitetsarbeid. I K. Stensæth & L. O. Bonde (Eds.) *Musikk, helse, identitet* (pp. 85–105). NMH-publikasjoner 2011:2. Oslo: Norges musikkhøgskole.
- Schei, T. B. & Åvitsland, B. S. (2016). Stemme stress og konsekvenser for lærerstudenten. *Norsk Tidsskrift for Logopedi*, 62(2), 6–13.
- Scherer, K. R. (2003). Vocal communication of emotion: A review of research paradigms. *Speech Communication*, 40(1), 227–256. [https://doi.org/10.1016/S0167-6393\(02\)00084-5](https://doi.org/10.1016/S0167-6393(02)00084-5)

- Schmidt, C. P., Andrews, M. L. & McCutcheon, J. W. (1998). An acoustical and perceptual analysis of the vocal behavior of classroom teachers. *Journal of Voice*, 12(4), 434–443. [https://doi.org/10.1016/S0892-1997\(98\)80052-0](https://doi.org/10.1016/S0892-1997(98)80052-0)
- Simberg, S. (2004). *Prevalence of vocal symptoms and voice disorders among teacher students and teachers and a model of early intervention*: University of Helsinki. Retrieved from <https://helda.helsinki.fi/bitstream/handle/10138/19739/prevalen.pdf?sequence=2>
- Simberg, S., Laine, A., Sala, E. & Rönnemaa, A.-M. (2000). Prevalence of voice disorders among future teachers. *Journal of Voice*, 14(2), 231–235. Retrieved March 13, 2016 from [https://doi.org/10.1016/S0892-1997\(00\)80030-2](https://doi.org/10.1016/S0892-1997(00)80030-2)
- Simberg, S., Sala, E., Vehmas, K. & Laine, A. (2005). Changes in the prevalence of vocal symptoms among teachers during a twelve-year period. *Journal of Voice*, 19(1), 95–102. <https://doi.org/10.1016/j.jvoice.2004.02.009>
- Steyn, M. & Munro, M. (2015). Locating the ‘voice-as-object’ and ‘voice-as-subject’ for the entry-level theatre voice teacher. *South African Theatre Journal*, 28(2), 105–116. <https://doi.org/10.1080/10137548.2015.1033377>
- Sviland, R., Martinsen, K. & Råheim, M. (2014). To be held and to hold one’s own: narratives of embodied transformation in the treatment of long lasting musculoskeletal problems. *Medicine, Health Care and Philosophy*, 17(4), 609–624. <https://doi.org/10.1007/s11019-014-9562-0>
- Tavares, E. L. M., & Martins, R. H. G. (2007). Vocal evaluation in teachers with or without symptoms. *Journal of Voice*, 21(4), 407–414. <https://doi.org/10.1016/j.jvoice.2006.04.001>
- Tendeland, E. (2009). *Stemmevansker i stemmekrevende yrker: Læreres opplevelser av logopedisk stemmebehandling*. (Master’s thesis), University of Oslo, Oslo.
- Titze, I. R., & Laukkanen, A.-M. (2007). Can vocal economy in phonation be increased with an artificially lengthened vocal tract? A computer modeling study. *Logopedics Phoniatrics Vocology*, 32(4), 147–156. <https://doi.org/10.1080/14015430701439765>
- Valtasaari, H. (2017). *Kestäkö ääni?: laulunopetuksen vaikutus opettajaksi valmistuvien äänen laatuun ja ilmaisuun [The impact of voice pedagogy intervention on voice quality and expression of students in a teacher education programme]*. (Ph.D.), University of Jyväskylä, Jyväskylä.
- Wellens, W. A., & Van Opstal, M. (2001). Performance stress in professional voice users. In P. H. Dejonckere (Ed.), *Occupational voice: Care and cure* (pp. 81–100). The Hague: Kugler Publications.
- Willard, K. T. (2007). *Med stemmen som arbeidsredskap: En undersøkelse knyttet til lærere og stemmebruk*. (Master’s thesis), University of Oslo, Oslo.

- Yiu, E. M. (2002). Impact and prevention of voice problems in the teaching profession: Embracing the consumers' view. *Journal of Voice*, 16(2), 215–229. [https://doi.org/10.1016/S0892-1997\(02\)00091-7](https://doi.org/10.1016/S0892-1997(02)00091-7)
- Øvreberg, G., & Andersen, T. (1986). *Aadel Bülow-Hansen's fysioterapi. En metode til omstilling av anspent muskulatur og hemmet respirasjon*. Tromsø: Tromsprodukt.
- Åhlander, V. L., Rydell, R., & Löfqvist, A. (2011). Speaker's comfort in teaching environments: Voice problems in Swedish teaching staff. *YMVJ Journal of Voice*, 25(4), 430–440. <https://doi.org/10.1016/j.jvoice.2009.12.006>
- Åvitsland, B. S. (2007). Stemmevansker – “nesten som en slags utbrenthet”. In E. Olsen & S. S. Hovdenak (Eds.) *Musikk – mulighetenes fag*, pp. 47–64. Bergen: Fagbokforlaget.

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