

EUROPEAN VOCAL PEDAGOGY – DIGITAL RESOURCES TECHNOLOGY

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La Technologie Digitale et L'Apprentissage Vocal

It must now be the common concern of voice teachers, scientists and software specialists to build bridges between traditional methods, the knowledge of recent research and the use of technology. Voice science and software developers have done their job: now it is up to us as voice teachers, to approach this subject from the pedagogical viewpoint!

Les Approches de l'enseignement du Chant

We, even the voice researchers know, that traditional methods have functioned very well over many centuries. One-to-one vocal pedagogy has had different phases as the cultural idea of voice use has gone through aesthetic changes, but nothing has, and nothing will substitute for **the teacher-student based learning situation**. All methods, styles and materials are tools within this context.

- “Sentir une rose” – L'approche traditionnelle

Until we actually knew how the vocal instrument functions, much of voice teaching was based on healthy physical and artistic intuition of both teachers and student and on their ability to communicate through images. A whole repertoire of “as if” images address the imagination or physical sensations of sound. One of the most famous is the challenge to inhale and “imagine you are smelling a rose”. The use of images remains a basic component of teaching artistic expression, but it has its limits because it is subjective. However, this vocabulary is inadequate when we are dealing with vocal problems or have an inquisitive student who asks for more knowledge.

- *L'instrument vocal – L'approche physiologique*

Since Manuel Garcia invented the laryngeal mirror, we have been able to see the vocal lips in action. Science and medicine have never stopped fascinating us with further details on the singing instrument. Today, we know how the voice functions, understand the laws governing it and can identify the effect certain muscular patterns have on vocal sound. The medical profession has provided us with diagnostic possibilities for vocal disorders of which singers of earlier times never dreamed in their wildest imagination.

Clear physiological and anatomical information has become an integral part of good voice teaching. Basic knowledge is available in many understandable forms and our conferences and continuing education programmes include physiology themes on a regular basis. But this too has its limits. Although it leads us to more reliable vocal quality it does not unlock the secrets of musicality or an artistic performance.

- La méthode digitale – L'approche technologique

The digital age has also brought us new tools. Of themselves, they will also not lead to artifice performance or healthy vocal sound. The available materials include small recording devices, multi-function telephones, the possibility of creating an orchestra via computer, playback materials for classical singers as well as for the popular music sector. In addition, the Internet offers access to libraries, transposition programmes and an extensive resource of video recordings, and voice researchers and software developers have produced effective software for voice analysis. These possibilities open doors to a third exciting new approach to teaching.

However, they too have their limits. Voice analysis for example, will tell us what should change, but the computer will not tell the individual student how to change his sound production in order to achieve a better, more efficiently produced sound. Recorded lessons do not always lead to better results and teaching our students criteria for judging good interpretation or identifying healthy vocal production have become part of the teachers' job. The role of the teacher is changing and is probably more important than it ever was.

Prochaine étape: construire des ponts

Voice teachers who are finding ways to integrate these new tools effectively into their teaching, are still islands in the sea of teachers. Workshops presenting research results have become commonplace at our conferences, but something has been missing. We must admit, that we have been reluctant to accept and integrate them into our teaching.

As a member of a professional organisation, I have heard many explanations of the software for voice analysis, for example, and learned a little bit each time. But I often found myself lost in this new world.

A documentation which typifies my experience reads as follows:

“The time passed very quickly and the discussion on how objective voice analysis could be integrated into a pedagogy concept did not lead to concrete results.”

Christa M. Heilmann, Stuttgarter Stimmstage, 2002 in the section Voice Science

Several questions arise:

- Why is this subject still in the section on voice science?
- What is the missing link?
- Can't it be simpler? At least on an initial basis?

One thing is clear: Scientists, researchers and doctors will not answer our pedagogical questions. They are fascinated by different things and work at a different pace than we do. But they have given us a wonderful gift – and in a way, we unpacked it under the Christmas tree but went home, leaving it at their house. We need to take it with us and figure out how to use it!

How can we learn to use it? The answer is really surprisingly simple. No one learned to drive car by watching my father, nor by listening to his explanations, but by getting behind the wheel myself. In both cases, it is the only way. Of course: the more I know about the images I see, the more possibilities I will find for using voice analysis just as I hear more in an opera, song or symphony that I have studied. But I didn't find that out by looking at the CD either, but by getting involved.

All we need to do is start. This also means we need the courage to make mistakes, ask dumb or naive questions and maybe even to look silly! It is a challenge to our understanding of our role, and we may feel insecure. But once more, let's face it: it is because we already feel insecure because we are not using it, so this could only mean creating a change for the better!

Finally, I have concluded that initially, my students and I don't need to know a lot in order to find effective uses for these tools. They do work on an initially simple basis.

We won't build that bridge without getting into the water!

La Troisième Approche

- *L'objectivité*
- *Le renfort technologique*
- *L'extension du répertoire*

Why is this important ?

- ◆ *La future génération*

Our children and student-aged youths have already grown up with technology at their fingertips. University graduates – that is, the next generation of teachers(!) are totally computer literate and at home on the internet and with a search machine. We have become accustomed to the visual stimulation of 3-D images, for example, to switching them around to see different perspectives. Writing SMS messages, checking YouTube for music, never mind doing a quick video recording with a mobile phone are everyday activities. A traditional voice lesson must seem a relic of the past to our students – it may be a change, but it is like going through a museum.

As their teachers, we need to be aware of the fact, that our students are not waiting for us: they are already using these tools. Let's not fool ourselves: many of them learn their music via YouTube and they post lessons or concert performances on the internet. But what criteria do they have, for the quality and usefulness of recordings or software? How do they know which materials are well-founded and which are not? Is it not a comfortable excuse to leave it up to the younger generation to sort through the possibilities by trial and error? Should we really leave it up to them? After all, we all drive a car, take a train or plane and use GPS without even thinking about it. If we aren't careful, we will miss the plane!

Technology for voice analysis, for example, has three important characteristics.

- ◆ *L'objectivité*

It objectifies vocal sound: my consonants are this big – my teachers' are THIS big! There's no arguing with the picture! It gives the teacher and the student the same information and makes the student curious about changing his singing.

- ◆ *Le renfort technologique and builds trust*

How often have you asked a student to work at developing a better legato, being more precise about onset or entry on time with the piano? Showing it to him on the screen can be very effective in building trust by reinforcing what we say.

- ◆ *L'extension du répertoire*

In my own studio, I finally had the courage to have the computer consistently available over the last months with the voice analysis programme open and running. One of my students recently drew my attention to the fact that my own imaging of the students' voices has been changing. She noted that I now often seem to have a mental image from the screen running in my mind when I listen to a student. So it's not always the student who uses the software – it can also change my perception of a students' voice.

QQPCQ?* Quoi, Quand, Pourquoi, Comment et pour Qui?

As with any method or teaching material, one of the critical questions is "What, when, why and how for whom?"

Expérimenter dans mon studio - five case studies

- *“Cela ne veut rien dire pour moi!”*

Why, for example, did Student A flatly tell me “That means absolutely nothing to me and I don’t want to know anything about it!” Another is fascinated and helped by the moving lines of a voice analysis programme?

- *“Je fais des trous!” ou du Legato*

Student B from Korea and I both wished for a true legato for an Italian opera aria. By nature, her voice has a fluid sound and I couldn’t understand the lack of legato or seem able to explain to her what was missing. One day she noticed the correlation between the lines on the screen and her singing and asked what it meant. I said only, “That is like a of picture of your voice.” She sang once more and watched the lines. After I had demonstrated the phrase, she tried again. Her eyes got bigger and bigger: “Oh, I make holes!” she said, “You make lines! Once more!”

For her, seeing the image was worth the proverbial thousand words. I explained nothing of what the different lines and colours and white spots were about. On the third try, she asked if the changes in the colours were right. The next step was to ask her to divide her attention between the image she was seeing and her physical sensations. We ended the lesson by defining the new sensations (mostly in Korean!), and she went off to practise. After checking the images during the next couple of lessons, she had internalized what she had learned. Now I just say “Make lines, not holes!” We laugh and she knows what I mean – and above all, what to do about it.

- *“Je fais des briques!” ou des sons dynamique*

Student C thought he was doing a wonderful job of crescendo-decrescendo. I didn’t. Using the amplitude section of the software, I asked him to sing and describe the tones he saw. He came up with “Well, they look like building bricks!” In fact, he was not doing what he thought he was doing! I suggested that he imitate the shape of the standard crescendo-decrescendo signs used in classical notation. The physical response was immediate. An advanced student, not only did he recognize that his support and tone quality collapsed immediately after the top of the crescendo, but he also had concrete help in judging his own singing and changing the pattern.

- YouTube: L’énergie en question

Student D had a chronic lack of physical and emotional energy, in other words, she was lazy. Energizing exercises lasted until the end of the lesson, but we sartered at the same place each time. One day she came into a lesson and I sensed after the first phrase that something had changed. When I asked what had happened, she replied, “I was thinking about what you said about my energy so I spent a lot of time on YouTube over the weekend, looking at all kinds of videos – singers, instrumentalists, men, women, conductors. It was a revelation - it’s A LOT!” I would have never dreamt of giving her such an assignment, but believe me: someone else will get it now!

- Ecouter ou écrie - la leçon enregistrée

The last example: Student E faithfully recorded every lesson and practised with the recording - until we ran into an impasse. She was overcontrolled, tense, concerned with details and missing the bigger picture. She was also getting impatient about her development and I was doubting whether I was the right teacher for her. I asked how she learns her material for other subjects. “Oh, I learn everything by writing it down!” she said. It was suddenly clear to me, that the recording was the wrong approach for her. We agreed that she would not record the lessons but simply write down the three most important things she remembered after the lesson, trusting herself to forget the rest! This has proved a much more effective approach for her.

La technologie digitale

- ici pour rester
- possède de nombreuses possibilités
- peut être simple
- ouvre de nombreuses portes
- les étudiants ont des idées
- nécessite une méthodologie

My initial answers to the question of digital technology are clear:

- It is here and here to stay: Digital technology is already part of our lives and our teaching. It is not going away.
- Digital technology has many possibilities and applications.
- Using technology effectively can be relatively simple.
- Technology opens new doors but the possibility of using it simply doesn't release me from the responsibility to learn how to use it more extensively. The more I know, the more I understand, the more doors it will open to seeing, understanding and interpreting the images.
- Students have ideas. Our young students have grown up with technology and will come up with very good and useful ideas on their own, but they will also sometimes have the wrong ideas!
- Therefore we need a methodology for its use. We need literature and encouraging continuing education programmes.

Technology is not a substitute for a teacher but a challenge. Voice analysis, for example, will give us information but it cannot tell the student which change to make or how to achieve the desired result.

QQPCQ?* **Quoi, Quand, Pourquoi, Comment et pour Qui?**

Reconnaître le type d'étudiant, les styles et les stratégies

These simple case studies point a further question: what information about learning styles, typologies and strategies could help us define the right method for each student? I believe they could be very helpful in building our bridges between various approaches and developing our methodology for the use of digital technology of many kinds in our teaching. They might even be helpful in the other aspects of our teaching!

Le processus de connaissance s'engage

David and Alice Kolb developed a theory of experiential learning that names 4 factors essential to the learning process. Processing knowledge involves different areas of the brain.

- ◆ L'expérience concrète – "I make holes! You make lines."
- ◆ L'observation réflexive – "What does that mean? What should I change?"
- ◆ L'hypothèse d'abstraction – "Will the picture will improve if I do this?"
- ◆ Le test actif - "Yes it does. How can I extend this to the rest of my singing?"

Furthermore, methodology should include the following aspects.

Pour apprendre, les étudiants ont besoin

- ◆ D'être engagés
- ◆ D'explorer
- ◆ D'avoir l'explication des choses

- ◆ D'appliquer leurs connaissances
- ◆ D'évaluer les résultats

In order to learn, students need to

- ◆ be involved
- ◆ explore
- ◆ have things explained
- ◆ apply their knowledge
- ◆ evaluate the results

One of the significant conclusions is that learning is a process involving these phases all of which must be gone through for effective, long-term learning to take place. The question is: with which phase do I start? This also applies to us as teachers in dealing with unfamiliar new tools and materials as well.

David Straker, a British researcher has listed six learning styles:

- *Ceux qui écoutent* – Listeners like to receive clear directions as to what to do. „Put your hands here and feel that.“
- *Ceux qui lisent* - Readers ask for notes or books and take them home. Important to them is to be able to go at their own pace.
- *Ceux qui écrivent* - Writers learn by thinking about what they know and writing it in their own words.
- *Ceux qui parlent* - Talkers need to question, challenge and discuss the subject until they understand.
- *Ceux qui observent* - Watchers like to be shown how to do something, then imitate what they have seen. They would be ideal students for voice analysis.
- *Ceux qui font* - Doers learn by trying something out and finding out what works and does not work for them.

Utiliser nos sens

- *Loreille*
- *La vue*
- *Le toucher*
- *La communication*
- *Le mouvement*

▪ Using our senses

Another approach according to Petra Sütterlin, involves the role of our senses in experiencing our learning situations:

- Obviously, hearing is an essential part of singing, both for teacher and student.
- Seeing is important when we check posture, for example, or watch the analysis on the screen.
- Touching is also a part of the communication between teacher and student. Recently, I read an article about the importance of the old-fashioned physical examination by doctors. In a current study, patients were told they were being given a placebo, but half of them were given a hands-on physical examination by their doctor and the other half were treated on the basis of laboratory results only. Which half felt they had improved?

Of course it was the ones with the physical examination. Used with sensitivity, the physical contact between teacher and student can be helpful. Misused, it can be destructive.

- Smelling the roses and tasting the tone is somewhat abstract, but these images do make use of our sensual memories.
- A sense of movement is central to the complex patterns of physical co-ordination needed in singing.

The traditional imaging approach requires the student to imagine a different sound than the one he is making and often uses sensual images such as “feeling the tone”, doing something “as if...” But what do I do when a student says: “I can’t imagine how my sound could be different.”? He may be a listener or a reader.

The physiological approach is good for the talkers, watchers, and readers. They will be the first to study a book and learn the names of the muscles and their functions. They often have a good feeling for the larynx. But what do I do when someone says, “But I can’t remember those Latin words and I don’t feel anything in my throat?”

The approach using technology tools involves other senses. A recording appeals directly to our hearing, voice analysis to our visual sense. Both give us objective information to process. Watchers will be particularly open to voice analysis, for example.

Naviguer avec les étoiles ou utiliser le GPS?

- L’image
- La physiologie
- La technologie

Navigating by the stars got Columbus to Cuba, even if he thought it was India. It got Franklin lost in the Canadian Arctic and took Cook to Australia. Our paper maps also got us to our holiday cottages, but the information from the GPS is definitely much more helpful on a long trip than my husband sleeping beside me with the map on his knees!

Let’s face it! We all use satellites for TV and mobile phones, we communicate via E-mail and SMS, jump on a plane and get our cash from an automatic machine. Our students do not know a world without computers. Why are most of us – myself included - still travelling through our teaching days “on foot” so to speak?

Many of these technologies are used for the purpose of connecting with other human beings. However just as GPS is no substitute for the stars, and TV doesn’t take the place of a live concert, and a telephone conversation plays a different role than a coffee or dinner date. “Smelling the roses” is an essential tool for teaching, but it does not substitute for objective analysis or knowledge of the singing instrument. In the same way, the computer serves a purpose, but does not substitute for the teacher-student relationship.

Technology will give us objectivity, but it will not put the soul in the voice or define beautiful or expressive singing any more than physiology or imaging will. It will not put us out of a job, but it will redefine our role.

Construire des murs ou des moulins à vent?

Hans-Dietrich Genscher

In 2009, Europe celebrated the 20th anniversary of the bloodless revolution that historically ended the Cold War. On that occasion, Hans-Dietrich Genscher, the foreign minister of Germany in 1989

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said: « Quand les vents du changement soufflent, on peut, soit ériger un mur ou construire un moulin à vent. Je préfère construire un moulin à vent. »

Wenn der Wind der Veränderung weht, kann man entweder eine Mauer errichten, oder man kann eine Windmühle bauen. Ich habe es vorgezogen zu versuchen eine Windmühle zu bauen.”

And I prefer to try to build a bridge!

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Prof. Norma Enns, President EVTA

enns@evta-online.org

enns.evta@gmx.de