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Publication Details

Latukefu, L. (2009). Peer learning and reflection: strategies developed by vocal students in a transforming tertiary setting. *International Journal of Music Education*, 27(2), 124-137.

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Article published as: Latukefu, L. (2009). Peer learning and reflection: strategies developed by vocal students in a transforming tertiary setting. *International Journal of Music Education*, 27 (2), 124-137

Peer learning and reflection: strategies developed by vocal students in a transforming tertiary setting

Lotte Latukefu

Abstract

The focus of this article is on the analysis of reflection and peer learning in the pedagogical environment. The research draws on findings from an Australian study, which aimed to develop and critically evaluate a model of vocal pedagogy influenced by socio-cultural theories. The model sought to position Vygotsky's theories in the environment of university-level vocal instruction. To capture the developmental nature of this pedagogical project, a design-based development research methodology was employed. Central to this approach was flexibility of the design, multiple dependent variables and capturing social interaction. The students were not the subject of experimentation, but were co-participants in the design and analysis. The results of the study suggest that there is value in peer learning for both classical and non-classical singers at an undergraduate level. In particular, the data from the student journals in the present study also suggests that if the environment is arranged in such a way that peer learning is encouraged and purposely mediated, singing students find this extremely helpful as a learning strategy.

Introduction

This article draws on findings from an Australian study, which aimed to develop and critically evaluate a model of vocal pedagogy influenced by socio-cultural theories. The model sought to position Vygotsky's theories into the environment of university-level vocal instruction.

The focus of this article is on the introduction of reflection and peer learning into the pedagogical environment. The main purpose of this initiative was to encourage students to take more control of their own learning of singing and move toward the goal of self-regulated learning, which is underpinned by an educated reflexivity (Fisher, 2003). Research referred to by Hallam (2001) that investigated the issues of enabling students to learn (Da Costa, 1999; Jorgenson, 1997; Nielsen, 1999), was unanimous in its view that training in conservatoires should be designed to develop reflective learning.

A Norwegian study carried out by Nielsen (2004) found that first-year music students in the music academy did not use fellow students to help and support each other with learning. She made recommendations that higher music education should take responsibility to create an environment that encourages this type of peer learning. The present study investigated the outcomes when a peer-learning environment was introduced in a regulated and organised way.

This research is built upon Vygotsky's theory, which describes the process of learning as co-construction of knowledge between the teacher and the learner or between learners, which later becomes internalised by the learner through a series of transformations.

An interpersonal process is transformed into an intrapersonal one. Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual

level; first *between* people (*interpsychological*) and then *inside* the child (*intrapsychological*). (Vygotsky, 1978, p. 57)

The research used a qualitative approach where focus was given to a small number of in-depth cases, and moved from a description of what a participant's experience was and the meaning participants attributed to their experience to interpretation of the data by the researcher in order to attempt to explain why this was the case (Hitchcock & Hughes, 1995; Trahar, 2006). Students were asked to make reflective journal entries twice in a 13-week session over the three years. These data were collected and analysed.

In the first session of first year, students were briefed on how to write a reflective journal using CARLT (Context, Action, Response, Learning and Transference), a reflective tool developed by the University, and then asked to keep a weekly journal and write their reflections using this tool. The assessment criteria were based on the way that they used CARLT for reflections, whether they were able to articulate which singing skills had developed and which had not and why, whether they showed a linkage from their theory to their practice and whether they had made any attempt to transfer skills they had learnt in other classes to their singing. After one university session (13 weeks) during which they used CARLT, the students were only required to write a reflective essay at mid-session and end of session in which they developed strategies to help improve their singing. They were prompted by the following questions to help them reflect:

- How has my singing developed since the beginning of session? What needs to improve?
- What strategies do I need to develop and practice to improve?
- What have I read about singing or voice and how can I apply it to my own practice? Have I referenced this and do I have a bibliography?

- How have I tried to transfer any of my developing vocal skills to other situations? What happened?

At the end of each session they reflected on whether the strategy had worked and refined or changed the strategy in order to further improve. Again they were provided with a question guide, which encouraged them to think about how they were developing and what they could do to overcome any vocal issues.

There were 70 participants and all gave consent for their journals to be retained and analysed. Interpretative phenomenological analysis (IPA) was used for the analysis (Smith, 1999). IPA investigates the participant's experience from his or her own perspective. However, it recognises that this investigation must implicate the researcher's own view of the world, and is therefore an interpretation by the researcher of the participants' experience while at the same time an attempt to capture the quality and texture of the individual experience (Willig, 2001). IPA was first used in health psychology (Smith, 1999) and has also been adapted and used in music research (Davidson & Borthwick, 2002; Holmes, 2005; Sansom, 2005). IPA studies involve a detailed case-by-case analysis with the primary aim being to examine in detail, the perceptions and understandings of the specific group studied, rather than making more general claims (Chapman & Smith, 2002). In the first stage of analysis journals were read and initial observations made in response to the text. Any statements made by students at this stage that were thought to be relevant to the research were highlighted and examined again later. Highlighted texts were grouped under umbrella themes that summarised and captured the quality of the participants' insider experience of the development of their singing, while the researcher related these to the socio-cultural theoretical model.

Scientific research in singing often focuses on isolated biomechanical or acoustical problems, which are tested within laboratory contexts and which, while adding to the body of technical knowledge about how the voice works do not take

into account the holistic nature of singing. In respect of learning and cognition, such a narrow laboratory approach cannot provide an understanding of the richness of the class setting or studio context in which students are constructing learning. Teachers have transformative agendas and it is not enough to simply observe. Instead, it is necessary to conjecture the kinds of learning activities that might assist students and then test these in the context of the classroom (Barab & Squire, 2004; K. Gravemeijer & Cobb, 2006).

To capture the developmental nature of this pedagogical project, a design-based development research methodology was employed (van den Akker, Gravemeijer, Mckenney, & Nieveen, 2006). Central to this approach was flexibility of the design, multiple dependent variables, and capturing social interaction. Participants were not subjected to experimentation, but were co-participants in the design and analysis (Barab & Squire, 2004).

Design of classroom environment: the context

In 2002, enrolment numbers into the traditional music performance course that existed at the university had dwindled. Rather than close down the course, a decision was made to amalgamate singing into the drama department. There had previously been very little collaboration with drama, and earlier attempts by the drama department to have someone teach singing had been resisted, as none of the teachers in the singing department were very interested in teaching classes of actors to sing. In fact, there was a lot of opposition to class teaching in case it meant a drop in standards. However, the amalgamation went ahead and instead of teaching individuals using the earlier format of the one-to-one lesson, the singing teachers were now expected to teach students in small groups. A key concept that had to change for the new course design to become feasible, was the notion that every student needed an individually styled technique and that it was up to the teacher alone, to solve vocal difficulties that the student was experiencing.

The instructional design and transformation of the classroom environment was constructed collaboratively, in consultation with other staff, and used the reflective journals that students wrote during that time as a way of refining and changing the design. Also influencing the design was student feedback from surveys conducted every session and consultation with lecturers from the Education Faculty on aspects pertaining to the theoretical framework.

The employment of a spoken voice teacher who was also a lecturer in speech pathology meant the students gained an introduction to techniques, which focused on action at the laryngeal level (Mitchell, Kenny, Ryan, & Davis, 2003). These vocal techniques followed a developmental path that enabled students to work at their own level and still follow the path given to them in class. Vocal students learnt the anatomy and physiology of the vocal apparatus and the muscles needed to develop good singing through body mapping and constantly reflecting from theory to practice. The lecturer/researcher anticipated that students would begin to develop a deeper understanding of the general concepts of singing that could be applied to any new song.

Classroom environment and peer learning

The most difficult task in the development of this new environment was to challenge some of the established norms that had been part of the author's own training as an opera singer and were still being promulgated in conservatoriums around Australia. Nerland (2007) points out that the conservatoire is organised around the teaching of the principal instrument in a one-to-one situation. Not only that, but the traditions and historical practices that include how the repertoire is performed, and even how much repertoire should be learnt all contribute to the "maintenance of particular cultural practices" (Nerland, 2007, p. 399).

The transformed singing course was divided into advanced singing for students with potential to study classical and operatic repertoire, and general singing for students who just wanted to learn singing as part of their actor training. As part of the new environment, a routine was established in class of learning a vocal exercise as a group and then each student singing the exercise on their own. The other students in the class then commented on the performance, taking into account not just vocal technique, but also interpretation and communication. One of the biggest challenges to accepted practice was the lesser importance which repertoire played in the learning of singing at an undergraduate level. Instead, vocal exercises were prominent in the class because all students, male or female, could learn these as a group. As the students progressed into second and third years, the vocal exercises became more demanding, requiring them to have acquired fine motor skills in their vocal apparatus and an increased range. The amount of feedback from the lecturer gradually decreased and instead the members of the class were encouraged to deal with problems themselves with the lecturer only assisting when required. Throughout the three years that they studied singing, the importance of taking responsibility for their own learning was constantly stressed.

If no one in class had any comment the lecturer prompted by asking, 'How could J improve what he just sang?' The teacher's prompts were important in this process, and so were allowing sufficient time for the group to discuss what they had heard and how they thought things could improve. Questions had to be exploratory and required the students to reflect, rather than simply answer yes or no. The development of this learning environment relied on research, (Zhukov, 2007) which suggested teachers must try to avoid asking questions that fall into previously established patterns such as, 'does that feel better?', or 'are you happier

with that?’ to which students often reply automatically and without any reflection (Burwell, 2005).

Individual stories of vocal development

Four individual case studies of vocal development are presented here. They represent the different backgrounds of students being accepted into the performance course: those with previous singing and music training; those without previous singing or music training; those with some previous music training on an instrument; and those who were self-taught musicians. In all four cases, the students managed to achieve considerable vocal development over the three years in the course, regardless of their background. This development assisted the researcher in understanding key aspects of their developing skills in singing, which was another reason for choosing them to tell their stories. Those selected had also attended singing classes and wrote regularly in their reflective journals. The reflections in their journals were thoughtful and provided evidence of their own understanding of their transformation (Kiely, 2006).

These participant accounts of the strategies they used and how the created teaching environment affected their development provided an insider viewpoint. The reflections represent a view of the world from the students’ perspective while at the same time acknowledging that meaning is negotiated within a social context (Smith, 1995), and that what is written here is the researcher’s interpretation of this perspective. When the students write in their reflective journals about how their singing is developing they are interpreting and modifying the meaning of things that are happening to themselves (Blumer, 1969).

The participants were given pseudonyms, Cleo, Zana, Arielle and Pablo. Cleo had never had any prior musical or singing experience. She did not identify herself as a singer and was not in the advanced singing class. Zana had previously

studied piano, but not singing before she entered the course, so unlike Cleo, who was musically illiterate Zana possessed some musicianship and had studied a musical instrument. Zana had identified from the beginning that she wanted to become a singer and was accepted into the advanced singing class. Pablo, a male singer, had never had singing lessons before, but played the guitar in a band. He did not have any particular interest in becoming a singer at the beginning of the course and was not put into the advanced singing group. Arielle had considerable singing experience. At her audition she sang a song from the classical repertoire and was confident with sight-singing and different languages. On account of vocal dysfunction as a child, which led to lack of closure in her vocal chords and a vocal chink, she had attended sessions with a speech pathologist that helped her achieve closure. Out of the four case studies presented Arielle had the most previous experience of singing and speech tuition.

Zana and Arielle were placed into the advanced singing class while Cleo and Pablo remained in the general singing class. Cleo's reflective journal writing showed that in the first session of the course she struggled with confidence and recognised some of her vocal difficulties, but could not yet overcome them. In week 4 of her first year she wrote in her journal:

I know that I'm not good at singing. This is an area I need to work extremely hard at. Singing is so foreign to me. So whenever I go out of my regular vocal range, I am completely lost. I have no idea where to go and no idea how to get there.

Cleo felt her lack of music education and singing lessons:

I don't know what half of these aspects of singing (resonance, tone, pitch, airflow) are, I am completely lost.

It was difficult also for Cleo that singing was something she did not excel at and in class she often used clowning as a way of deflecting attention from her lack of skill. In her journal entry at the beginning of first year, she reflected:

Standing in front of the class doing something I don't know how to do? I hate feeling that vulnerable...my weaknesses were showing. I really hated this exercise. I am working on feeling more comfortable in front of people...like I knew I was shit... I made a joke of it so the attention could be momentarily off my horrible voice. I felt that the nerves took control of my body and I was unable to think of anything else except for how petrified I was.

Pablo started the course the year after Zana, Cleo and Arielle. Although he lacked previous singing lessons, he was insightful and self critical in his reflections from the beginning. In first session of first year he wrote:

I couldn't effectively release constriction...though I know what it feels like, I have trouble achieving it outside of the sob or siren exercises. I am also still in confusion as to register.

The significance of peer learning in the collaborative construction of learning

A theme common to many other student journals, the positive influence of the peer-learning group on their performance, was revealed in Cleo's reflections. Early on, she commented on how listening to others gave her a sense of where she was in the group. Then as the year progressed, the peer learning took on a more specific benefit, helping Cleo to further construct her own understanding of singing. She wrote:

I learned a lot by simply listening to the critiques of others. I began to actively be aware of who was and was not using proper singing techniques; silent giggle, constriction, release of constriction, breath control, pitch, etc. This is something that I have never been able to recognise in myself, let alone others, nor able to articulate before either. I was able to identify what other people were doing right and what they were doing wrong and I learnt a lot from L's critiques, especially her comments about articulation, energy and pace to match accompaniment. I learnt an incredible amount from just listening to the critiques of others over the last couple of days, and have tried to implement those critiques to my own performance.

In the second session of her first year, Zana also began to see value in giving and receiving feedback from others in the class. In her journal entry at the time, she commented:

I listened to the others and offered them my observations. Usually I am hesitant to give criticism to other people and say very little but I found it was really easy to give people feedback, because I am also beginning to notice more about how others perform, and what they are doing with their body and voice while they do it. This seems to also be helping me also, as I am able to watch for it in my own performance.

Vygotsky's theory of Zone of Proximal Development (Vygotsky, 1978) promotes the idea of a novice performing a range of tasks that they cannot accomplish on their own, but in collaboration with an expert are able to achieve. The emphasis is on the collaboration and eventual shared understanding that develops between the expert and novice. To reach the learner's ZPD, the expert's assistance should be

slightly above the level of the learner's independent performance, but provide enough support to enable them to complete the task (Vialle, Lysaght, & Verenikina, 2005). In Zana's case, listening to the other students who were at a similar level, but a little more advanced, helped her hear the things that were within her ZPD and therefore were achievable goals. She wrote in her journal:

Every week in performance class I learn more about the amazing control singers have to have over their voices in order to produce the sounds they do. The difference between the third years and us is just amazing and I can see that training and applying these techniques is quite a long term thing that will take many years but you will still always be improving.

Arielle had mixed feelings about learning singing in small groups. She had had many years of previous training with a singing teacher in a one-to-one studio setting and she found it very difficult now to study in a group. She approached the lecturer/researcher many times after class to express her feelings of dissatisfaction and said that she just felt she could not improve in this sort of environment. Finally a compromise was reached with the suggestion that Arielle take individual lessons outside the course with another singing teacher. In second year she started receiving a mixture of group and one-to-one lessons at the university. The singing teachers and coaches consulted with each other on a regular basis to check on what each was teaching her and Arielle was much happier:

I am really happy with my progress this session and I think that the combination of private lessons with K, private lessons with L and an occasional group lesson, is a combo that really works for me.

Reflection

Reflection engages students in a meta-cognitive thinking process (Burwell, 2005). This makes practice more efficient because when musicians possess a certain amount of meta-cognition about their practice, they can think about what they need to do, in order to improve (Parncutt, 2007). Acquiring these meta-cognitive skills also means that students become more in charge of their own learning, thus becoming self-regulated learners. Zana was a case in point. She had begun to diagnose what was happening to her singing and was now working out what she needed to do in order to fix certain vocal problems. In her journal entry at the time she commented:

I have only recently really understood that by connecting the vowels on a string, you also create a flow through the words and it means that you still hold onto an idea even though you aren't making a great amount of sound. Because of this revelation, I have started to be able to recognise when I am doing it as well as other people. I have to really focus on hearing all those vowel sounds and extending them until I come to a new vowel sound but if I see them in my head then this isn't too difficult. I also need to be aware of not letting my airflow interrupt this line and allow it to compliment it instead.

Another example of self-regulated learning developing was in the case of Arielle, who discovered a way to use reflection to prepare for performance. She, like Zana and Cleo, found it useful to read other sources as part of her preparation:

I found some really good reminder phrases in Barbara Conable's (2000) 'The structures and Movements of breathing' (pp. 10, 11). These are reminders of different things you should

be remembering whilst singing. A teacher could say them to you or you could ask yourself the questions before you perform.

Cleo was developing what Schön (1983) has described as reflection in action. In order for all this to take place, she had to be in an authentic, experience based learning situation with real problems to overcome. She then held a 'reflective conversation' with the situation and worked out how to overcome the problem:

I realised the first couple of runs through something wasn't right. I realized that I must have been closing off my airflow and restricting my vocal chords, as it almost felt impossible to make a sustained sound. Briefly between songs I relaxed and laughed silently then attached the sound to the airflow, opposite to what I had been trying to do before. Eventually this enabled me to create a sustained airflow and sound that was more whole with more depth to what I had previously been producing.

Identity construction and change

Cleo's ability to overcome vocal problems while in performance was a complete transformation from the student who had initially used her clowning as a way of distracting the other students away from her singing. Despite her poor beginning in this performance, she had gained confidence in knowing what she had to do in order to improve her singing and this helped her immensely.

Cleo also displayed the ability to reflect on her own development and devise strategies for fixing problems like constriction. While Cleo could recognise herself as a habitual constrictor, she also realised that constriction was not a permanent problem, but one that needed to be worked through using strategies she had learnt:

I need to make sure that I don't constrict, as I'm a habitual constrictor. To combat my nerves I just try to force more air out to produce more sound, which is why at times I sound like I'm forcing the sound. This constriction is also due to my nervousness on stage.

Cleo recognised quite early on that the course was deliberately designed so that students had to take responsibility for their own development and learning:

I feel like I am several steps behind the rest of the class and am in need of extra practice and rehearsal to try and at least match them. I'm realising this is primarily a course for independent learning, you get given tools and techniques e.g. body awareness, breathing techniques, distracting techniques, activating exercises. Then it is up to you to put them into practice.

In the second session of her 1st year Zana began to construct a technique for herself. She used information from reading texts to triangulate the validity of the information:

L went around making sure the back muscles were engaging as well as gesturing for us to open our throats. She also let us feel her expanded ribs to show us just how much they should be opening. I was amazed at L's rib expansion and found that my own was not quite right and not nearly as large which is to be expected but it gave me an idea of just how much expansion could occur. I looked at a book by Oren Brown 'Discover your voice' (Brown, 1996), and a passage explained why this expansion must occur in order to increase volume and hold long

phrases properly so I found myself better able to visualize what should be happening and put this into practice.

Zana had gradually transformed herself from a belter with a breathy, constricted head voice, into a soprano capable of singing repertoire that required flexibility and good tone in the upper register. Zana tried to make improvements by incorporating reading from other sources, which turned out to be an effective means of mediating learning for quite a few students. The reading initiated a critical examination of different exercises that were presented to Zana by teachers. She compared them to exercises suggested in the books she was reading and made decisions about which exercises worked:

L suggested using one of the energising techniques we learnt in movement but I know that what works for me better than these is the exercise where you support yourself on your hands and toes while being raised off the ground. Kayes (2004) says that this is because the space has opened in the larynx and the vocal folds are able to vibrate more freely. The action of my hands pulling apart I think helps with this because I have a visual image to attach to the feeling in my throat that I have no possible way of actually seeing.

Arielle was also reading from other theoretical sources to confirm some of the technical things she adopted. She thought of them as ‘tips’:

Another tip that I got from a book titled “Solutions for Singers” was in regards to ‘tanking up’ for long phrases, or taking a massive breath in. Richard Miller recommended in this book that one breathe slowly and silently with no visible chest displacement because “over-crowding the lungs induces a faster rate of breath expulsion” (Miller, 2004:21). I think that I used to

tank up, but since I have been trying to breathe noiselessly, I think I have curbed my habit of “Tanking up”.

The singing lecturer had been employing the professional language introduced by the spoken voice lecturer, in order to simplify transfer of knowledge from one skill to the other. Zana’s reflections were revealing in that she had a notable command of this language and could apply this command to what she was now able to hear:

As my knowledge of vocal anatomy increases I feel I can better apply this to my own independent practise as well as criticising others constructively, which helps them improve as well.

Zana’s writing skills and the application of theory to practice that she was now making were also developing. While she may not have fully understood all the concepts when they were first introduced to her, by the time Zana had reached second year she had begun to achieve a deep understanding of their meaning (Wertsch, 2007). Her reflective journal illustrated her own recognition of this understanding:

In terms of how I sound and recognising what I need to do to improve I am improving dramatically. I found that in my practice sessions I had enough knowledge to be able to hear when a sound was breathy and concentrate on releasing constriction, using twang and a giggle posture and fixing the problem.

The growing perception by these four students that they were capable of taking responsibility for their own vocal technique and musical interpretation meant that they had succeeded in developing their own strategies for practice and improvement.

Zana was content to receive her instruction through class teaching for the first year of the course and then a mixture of class and one-to-one lessons in second year and the beginning of third year. She often wrote that it was helpful to watch and critique other students in class. Her understanding of technique and how to apply different techniques to her developing practice became more and more sophisticated. In the first session of her 3rd year, the faculty embarked upon an ambitious project to mount a new opera. The opera was challenging musically and vocally and involved a synthesis of Arabic and Maltese folk music with 12 tone serial composition. Zana sang one of the lead roles and for the first time in her reflective journal, she began to discuss how important she found the one-to-one lessons to her development:

I am increasingly finding that while I am capable of a technical function I need to be directed to do it and that I am not hearing when I could be doing something better. The process this session may allow me to be more attuned to this but I cannot help thinking that there will always be things that I will need to be told I am doing before I can recognise them. Recording myself could be a useful strategy to help this although I am sure that having someone else listen is necessary for anyone to progress.

Zana's singing had developed to a point where she needed more specific help from experts who could guide her to the next level. The complexity of the repertoire and the specific skills that were required both musically and vocally to solve problems that arose could not be provided simply through collaboration with peers.

Vygotsky spoke of development occurring in cycles of maturation processes that have already been completed and those that are just beginning to develop and mature (Vygotsky, 1978). At the same time a student can only reach a

level that is within her developmental potential. Vygotsky wrote that “the zone of proximal development permits us to delineate the child’s immediate future and his dynamic developmental state” (Vygotsky, 1978, p. 87).

In Zana’s case, her vocal development when she was cast in the opera was not at the point where she could sing the complex rhythms and melodic lines, nor had she had to cope with sustained high tessitura and singing over an orchestra. Her previous development in class and her increasing meta-cognitive skills that were displayed through her reflective writing meant it was possible to predict that, with guidance from her teachers she would be able to develop the skills necessary.

Discussion

The students found the introduction of a technical language (Conable, 2000; Estill, 1996; Kayes, 2004; Obert & Chicurel, 2005) that helped them describe the concepts that they were trying to understand, was extremely helpful. This in turn gave students confidence to give feedback to each other in class. The experiences recounted in these students’ journals suggest that if the teaching environment is arranged in such a way that peer learning is encouraged, singing students find this an extremely helpful strategy. The students can use peer learning to confirm vocal issues they are unsure of and this confirmation indicates, to less advanced students, what is achievable. Perspective sharing is an important part of a socio-cultural approach and ‘insights into the practices of others can be a valuable learning experience’ (Ladyshevsky, 2006, p. 74).

Vicarious reinforcement (Bandura, 1971; 1997 in Ladyshevsky, 2006) occurs by observing the experience of others and then modifying your own behaviour based upon the outcomes that they experience. These statements about perspective sharing and vicarious reinforcement are supported by the reflective journal writing,

where students speak about gaining confirmation about their own developing techniques by watching the performances of others in class.

The traditional structure of teaching in conservatoires and musical academies may encourage certain learning strategies and not others. 'If classical musicians are routinely trained in the use of imagery, they are more likely to report using it. Consequently the use of imagery will be more likely to appear in studies that sample classical musicians' (Kamin, Richards, & Collins, 2007, p. 450). Kamin et al discovered that non-classical musicians found peer influence exclusively positive, whereas for classical musicians it was a bit of both. Their recommendation was that peer influence is a good strategy for students, but only in certain contexts and perhaps the classical music context is not one of them.

Nielsen (2004) found that peer learning was used to a lesser extent for students studying music in a Norwegian Music academy than other strategies such as rehearsal strategies or critical thinking strategies, which again suggests that the structure of the training encourages those sorts of strategies.

The present study has found that if peer learning is encouraged through the restructuring of the learning environment, both classical and non-classical undergraduate singers find it helpful to interact with their peers. The value of peer learning that emerged from the data collected from students' reflective journals demonstrated how they were socially constructing their knowledge through listening to the experiences and strategies that others used.

The amalgamation of music and drama has meant that in the yearly intake of new students, there is a large variation in how much singing and music education they have received. Those students who have expressed mixed feelings about small group learning have usually come from similar backgrounds to Arielle. While they do acknowledge how useful it is to learn with others, they have often had five or six years prior one-to-one singing lessons before entering the course

and find it quite difficult not to receive the individual attention. The same solution has been offered to them as Arielle and seems to work; however, it does mean a constant effort on the part of the singing teachers to keep each other informed. The other advanced singing students also admit that once they begin receiving some one-to-one lessons and coaching, within the structure of the course, they love the individual attention that comes with the one-to-one lessons. In Zana's case, she reached a level of development that meant it was necessary for her to work with coaches who had a level of expertise that could guide her to the next stage.

Another by-product of the course transformation and also another example of ZPD (Vygotsky, 1978) is that the non-classical singers in the performance course at the university often seek out an advanced classical singer to help them with technique. Social interaction amongst students had to be encouraged within the culture of the school. An unanticipated consequence has been the breaking down of the dichotomy that sometimes exists between classical and non-classical singers or even the singing minor versus major that is often part of the conservatoire structure. One student who entered the course with no interest in becoming a classical opera singer was so influenced by her peers she switched to the advanced singing group.

The reflective journals the students have kept demonstrated that their writing assisted them in thinking and problem solving, which is consistent with Vygotsky's understanding of the development of language (1978). The journals provide an opportunity for students to solve a problem by thinking about the solution, carry out the solution through the activity of singing and then refine the solution if necessary. The author has consistently noticed that in students' reflections there appears to be a connection between an improvement in their singing and an improvement in their reflections. Anecdotal evidence from conversations with students confirmed that as they started to understand more

about how their voices worked they had more interesting things to reflect on, so they wrote more and explored these developments, which in turn helped their reflective writing as well as their own practice. In Pablo's case, his journal writing became much more detailed once he had mastered the technical terms to express himself. Zana and Cleo used their journals as a way to synthesize the different perspectives they were getting from books, and other classes involving spoken voice. The strategies devised to help with solving problems, were then used in a fresh cycle of comprehension through to reflection and this cycle continued (Clarke, 1999).

Conclusion

The results of this study suggest that there is value in peer learning and reflection for both classical and non-classical singers at an undergraduate level. At the same time, there is no doubt that there is still a place for individual tuition, particularly for advanced classical singers. In second and third year of the three-year degree, the advanced classical singing students are provided with individual repertoire coaching and their session is divided into 6 weeks of class work and 7 weeks of individual lessons. The combination of group and individual lessons has worked well for the classical singers as they learnt vocal exercises and technique with their peers, and then worked on their own individual repertoire for the rest of the session. The non-classical singers continue with small group lessons throughout their degree.

The reflective journals that students keep have repeatedly shown the high value that students place on watching the development of others and learning with them. The peer learning then reinforces the reflection as they critically evaluate each other and themselves, through the process of participating in class. This interaction seems to motivate their further learning.

Students who do not have the opportunity to experience one-to-one lessons, in the traditional conservatoire style, have still managed to develop their singing using strategies such as reflection and peer learning. What has been lost in the process is the amount of individual repertoire that an undergraduate typically would have gained in a conservatoire; however that is made up for by providing every student with the opportunity to perform in six fully mounted productions during their three-year course. The productions require them to transfer the skills they have learnt in class to an authentic performance situation. By learning in classes, at an undergraduate level they develop a language in which they can discuss their singing and through these discussions that often take place in corridors, during lunch times and with friends, they begin to construct a deep understanding and appreciation for the practice of singing. This chance to talk things through is another example of Vygotsky's concept of inter-mental learning. The fact that Cleo, Arielle, Zana and Pablo recognised early on that they were expected to take responsibility for their own learning, without the one-to-one support of a teacher, meant they made more of an effort to pay attention to what others were doing in class. Group teaching also meant that the students reflected on whether what they observed in others, could somehow be applied to their own practice. They have become well informed singers capable of critically evaluating technical problems in others and themselves and in this have managed to transform what Vygotsky (1978) described as an interpersonal process into an intra-personal one through reflection and peer learning.

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Chapter 4

THE CONSTRUCTED VOICE: A SOCIO-CULTURAL MODEL OF LEARNING FOR UNDERGRADUATE STUDENTS

Article published as: Latukefu, L. (2007). The constructed voice: a socio-cultural model of learning for undergraduate singers. Australian Voice, 13 8-15

Abstract

This article reports on the design and development of a model of learning for undergraduate singers influenced by socio-cultural theories. It draws on data collected from student reflective journals and the findings of a study conducted in 2005 where the aim was to examine the response of students to a changing curriculum in which traditional 'bel canto' singing technique was taught in conjunction with spoken voice class. the participants in the study were undergraduate students studying performance in the Faculty of Creative Arts at the University of Wollongong.

Introduction

Amalgamation of the Music and Theatre departments in the Faculty of Creative Arts at the University of Wollongong forced a change in the teaching of singing from the traditional conservatoire model that had existed in the Music Department prior to 2001. A snapshot of the UOW singing course in 2000 compared to 2007 shows the development in the course. In 2000 students studied music history, which provided a general survey of Western art music, harmony and analysis, aural and keyboard skills and music performance where students received individual singing lessons and weekly master classes. The teacher chose the repertoire and the pedagogical rationale was that we were working with individual differences and it was not practical to write a one size fits all course and then stick to it. The individual lessons needed to be organic and flexible so that the teacher could concentrate on individual problems.

In 2007 the undergraduate students study acting, movement, spoken voice, singing, character analysis and dramaturgy. In spoken voice class students acquire knowledge of the International Phonetic Alphabet (IPA), skills in transcription, vocal skills including tone onsets, control of resonance, articulation and loud voicing technique. They also develop skills in accent reproduction, text mapping and performance of emotional text. The majority of students now learn singing in small groups rather than individual lessons although we maintained a small number of advanced singers who still received a one to one lesson.

A key concept that had to change for the new course design to develop was the notion that every student needed an individually styled technique and that it was up to the teacher to solve vocal difficulties that the student was experiencing. This came about from working closely with the present spoken voice teacher who is a trained speech pathologist. Drawing on the idea that there are certain general techniques that students can learn in order to release constriction, the spoken voice

teacher has highly influenced the design of the course by teaching differentiated movement in the vocal tract and insisting students take responsibility for their own vocal technique development. Instead of turning up to spoken voice or singing and expecting the teacher to fix any vocal problems they have experienced during the week, students realise that ultimately constructing of vocal technique is their responsibility.

The design also drew on Vygotskian theory and the emphasis that learning and development is culturally, socially and historically mediated (Vygotsky, 1978). The concept of mediation connects to the interrelated theoretical concepts of scaffolding and assisted learning where teacher modelling and the presentation of content in conceptual clusters relevant to students' skill levels and prior knowledge are vital to the design of the course (Chen & Rovegno, 2000). This perspective argues that a student cannot simply be a passive recipient of this knowledge and nor should the teacher simply be a model for the student to imitate. Vygotsky described the process of learning as co-construction of knowledge between the teacher and the learner, which later becomes internalised by the learner through a series of transformations,

An interpersonal process is transformed into an intrapersonal one. Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first between people (interpsychological) and then inside the child (intrapsychological) (Vygotsky, 1978, p. 57).

Interaction between the student and teacher, or between students, in sharing knowledge and responsibility for the task of preparing the student to a path of independent learning, (Vialle, Lysaght, & Verenikina, 2005) was vital in the development of the new course and it brought Vygotskian theory into the vocal

studio setting by creating a socio-cultural environment, different to what had previously existed in the university level music course.

This change began at the audition stage where students were chosen for their potential rather than their polished singing skills. Instead of commencing immediately with individual singing lessons, first year students studied repertoire and technique in small groups. Sight singing and musicianship were embedded into the singing classes to discourage the dichotomy between theory and singing practice that can occur. Some students were chosen for an advanced singing class and in second year received individual lessons as well as continuing the small group classes. Others trained as actors and developed their singing skills as part of actor training. All students studied the same vocal techniques. The teacher encouraged discussion amongst students, about vocal problems they were experiencing, and students shared strategies that they may have developed to deal with similar problems.

Scientific concepts of vocal anatomy and techniques for releasing constriction and supporting the sound were taught in both spoken voice and singing voice class and provided students with a different perspective on vocal technique. Students used the different classes to confirm their own developing ideas of vocal technique. Students were expected to reflect on their own development in the form of a journal or reflective statement. They self-evaluated the effectiveness of the strategies they had developed. Finally every student participated in a full theatrical production in every university session in order to authentically use the skills that they were learning and develop their artistry.

The restructuring of the Music department was not the only catalyst for the development of a socio-cultural approach to the teaching and learning of singing. In 1997 I started teaching singing in the music department of the Faculty of Creative Arts in Wollongong. Until then I had followed a typical career path of any

hopeful opera singer. I completed an undergraduate Bachelor of Music where my personal experiences of beginning singing lessons were like a game of guessing what it was that my teacher wanted and trying to reproduce anything for which I was given positive feedback. I had no idea of what I was doing in terms of vocal technique. I moved up to Queensland to study with a teacher who had taught many very successful singers. I followed this with study in the US where I completed a Master of Music at the Manhattan School of Music. In that time I had to switch teachers twice, which was extremely stressful and took a great deal of careful diplomacy. In my first interview to be a singing teacher at a higher education institution, one of the interviewers from the Faculty of Education asked me which pedagogues had influenced my philosophy of teaching. This question startled me at the time because the real answer was that my own previous teachers were my main influence. This concern was highlighted by Clarke (1999) who characterised voice teaching in Australia as being taught “in private studios where the strongest point-of-reference is the teacher’s own experience as a voice student that then is reproduced for his or her students where demonstration and imitation are the chief teaching tools” (Clarke, 1999, p.34). There has been a change in the pedagogical content of Australian singing teaching through the dissemination of scientific theories about singing. These have had a great influence on teachers in Australia and the formation of societies such as the Australian National Association of Teachers and the Australian Voice Association have played a key role in the dissemination of information. Do we still however convey this new information in the same way that we were taught? Has educational psychology influenced the teaching of singing in the same way as scientific theories? Nisbet (2004) points out “Teachers and students have been actively and successfully interacting for centuries but often without awareness of what parts of the process work best and why. This can result in a lack of flexibility in the mode of operation, an inability to react to the needs of the student at hand or an ad hoc approach to innovation”

(Nisbet, 2004, p. 50). She goes on to say that because teaching and learning have traditionally been in the performing arts domain there has not been much linking between educational psychology and the learning of singing (Nisbet, 2004). The link between educational theories and the performing arts in the case of the present research came about from the non-viability of the traditional music course I was teaching into that led me to look at alternative models of learning.

An element of the design process in the development of a socio-cultural model of singing has been the collaboration between the spoken voice teacher and the singing teacher. Many tertiary theatre performance training courses in Australia advertise that both spoken voice training and singing training are part of their curricula, however at UOW, the music department program had not included spoken voice training. The theatre course had never had serious singing classes so it was new for the students to study singing and spoken voice.

This article begins with an overview of some of the literature relevant to the development of the new model and presents the outcomes of a pilot project that began the study. This study collated student responses to an altered curriculum structure in which, traditional bel canto singing technique was taught in conjunction with spoken voice class. Also included in order to illustrate some of the points in the final discussion are excerpts from the reflective journals, which the students were required to keep as part of their class assessment. Interpretative Phenomenological Analysis (IPA) was used to arrange and analyse the data from the journals. IPA has its origins in health psychology because of the increasing recognition of the constructed nature of illness (Smith, Jarman, & Osborn, 1997). In a similar way this study recognises the constructed nature of singing. This approach acknowledges the importance of understanding student's perceptions and interpretations of their bodily and singing experiences and the meanings, which they assign them.

Research in music education

Singing is an interdependent and organically changing synthesis of biomechanical vocal skills, musical skills, movement skills, character and text analysis and performance ability. As singing teachers we need to add educational psychology and philosophy.

Vygotsky viewed any attempt to break down the fundamental unit into elements as misguided and likely to distort the phenomena being investigated. Specialised perspectives such as the science of voice need to “take their place in a larger integrated effort (Wertsch, 1998, p. 12).” A lot of research in vocal pedagogy is scientific and quantitative with a tendency to focus on singing as a biomechanical process. Other music education research has focused on instrumentalists or has included singers as a category of instrument. One of the main differences between instrumentalists and singers is that singers have often started studying singing much later, sometimes in their late teens so the biographical determinants have different significance than for traditional instrumentalists such as piano or violin.

When developing and reflecting on a model of learning singing, it is what Callaghan (1997) describes as, the accumulation of research in areas such as the science of voice, the strategies that musicians use to access content and other attempts at alternative learning models and their outcomes, that help to inform the development of the model.

In Australia, McPherson and McCormick (2006) carried out studies on the importance of self-efficacy as a predictor of achievement in instrumental music examinations. This research was very relevant to one of the areas I was interested in exploring, which was to look at the correlation between teaching students scientific concepts about singing and the resulting self-efficacy that might come as

a result of students knowing how their bodies worked in relation to singing. A different research project looking at how instrumentalists (including singers) experienced learning was carried out in Sydney (Reid, 2001). The researcher reported on the variations in the way students understood or experienced learning. Reid described five related concepts of learning and these conceptions were defined using 5 levels (See Table 1.).

Table 1.

Summary of Reid's five Levels of Conceptions of learning

	<i>Conceptions of learning developed by Reid (2001)</i>
<i>Level 1</i>	The instrumentalist who focuses solely on the technical aspects of their instrument and learns by copying their teachers
<i>Level 2</i>	Some musical elements are focused on For example the instrumentalist who focuses on some musical elements.
<i>Level 3</i>	Focus of learning has shifted to meaning found within music and students learn by reflecting and adapting teachers advice
<i>Level 4</i>	Communicating level focus has shifted from just learning to communicate musical meaning. Students learn by experimenting with different styles of playing music using teacher as only one source
<i>Level 5</i>	Incorporates all other levels and includes a focus on expressing personal meanings through the music

A student at Level 5 of the conceptions of learning incorporates socio-cultural theories of teacher modelling, reflection, co-constructed learning and different perspectives and transforms these into high-level communication and performance and it was useful to have this to aim for with my own students.

Nielsen (2004) looked at the learning and study strategies of advanced music students and the way their self-efficacy beliefs related to the strategies they

employed. Nielsen's study dealt with instrumental students at a conservatoire. Nielsen described strategies as being deliberate or purposeful processes originally consciously applied, but normally undergoing automation as a result of development and practice. An interesting conclusion that came out of Nielsen's study was that the instrumentalists in her study did not make use of peer learning very much. Instead they tended more towards cognitive and meta-cognitive strategies. In the development of the model for the present study an assumption was made that peer learning would be vital part of the learning process and needed to be encouraged. Nielsen's study became the basis for the work on peer learning.

Pedagogical content and strategies for accessing content

The relationship between scientific understandings of voice and current practice of teaching in Australia was examined by Callaghan (1998). She was concerned with whether Australian singing teachers were actually incorporating any of the new scientific pedagogical content into their singing lessons. She referred to the problem of how these teachers imparted the knowledge and whether they did so in a way that was effective for independent learning. Despite this paper pointing out a gap in the research, I did not find any research papers addressing this problem of how teachers imparted knowledge. Instead there was a great deal of literature that focused on voice science and increasing pedagogical content knowledge in areas such as breath management (Cowley, 1999; Miller, 1986, 1993), phonation (Titze, 1995; Watts, Barnes-Burroughs, Etis, & Blanton, 2006; Westerman Gregg & Scherer, 2006), resonance and articulation (Kenny & Mitchell, 2006; Mürbe, Sundberg, Iwarsson, Pabst, & Hofmann, 1999; Oates, Bain, Davis, Chapman, & Kenny, 2006), registration, vocal health, control of voice (Callaghan, 1997), acoustical measurements of good singing and what happens physiologically to achieve this (Oates, Bain, Davis, Chapman, & Kenny, 2006), ventricular fold abduction and differentiated movement in the vocal apparatus (Estill, 1996; Kayes,

2004; Obert & Chicurel, 2005). Clarke (1999) challenged the dominant paradigm that exists that airflow is processed by vocal folds and then modified by pharynx, mouth and vocal cavities (Sundberg, Leanderson, von Euler, & Knutsson, 1991)

Research carried out into motor skill acquisition and practice organization (Schmidt, 1975; Sherwood, 1996; Sherwood & Lee, 2003) is very useful for singing in that it gives insight into how people can acquire long term learning, which was an important aim of this study. Magill (2007) distinguished between performance and learning. Performance is the behavioural act of executing a skill at a specific time and in a specific situation while learning is change in the capability of a person to perform a skill; it must be inferred from a relatively permanent improvement in performance as a result of practice or experience (Magill, 2007). Magill went on to describe five general performance characteristics that people demonstrate as they learn a motor skill. Firstly; performance improvement over a period of time; an increase in performance consistency; an increase in performance stability; a persistence of an improved performance capability and the capability to adapt to a variety of performance context characteristics. Although these characteristics were developed in a physical education context they are relevant to a singing context as well. My own experience of learning singing warned me that the final characteristic, the capability to adapt to a variety of performance contexts was the most problematic with the training I had received. Every time I had to learn new repertoire I felt the need to have a lesson before I could be confident that I was singing it properly. I was not adapting what I already knew to the new situation.

In an experiment carried out by Verdolini (1994) the researcher found that the subjects in the mental strategies group i.e. the group that used metaphorical images, showed no better performance than the group who were given no instruction at all. Although there is plenty of anecdotal evidence to support the use

of metaphors in learning singing, the evidence from Verdolini's experiment suggested that students were better off without constant feedback. Verdolini explained that for perceptual processing to occur in novel tasks subjects must devote their full attention to the task and if the teacher is giving out instructions at the same time the students may concentrate on the instructions rather than the task. This research has important implications for the method in which feedback is given to singing students in lessons. In a review of teaching strategy literature, Zhukov (2004) noted a study conducted by Young, Burwell and Pickup (2003) which found that "teacher directives ("command-style" teaching strategies) were a predominant teaching strategy in instrumental music lessons at university level" (Zhukov, 2004, p. 34). She also noted that research carried out by Rosenthal (1984) suggested teacher modelling, without verbal comments, may be the most effective teaching strategy to improve the accuracy of student playing. This was consistent with the findings of Verdolini (1994). Magill (2007) gives another reason for limiting augmented feedback, saying that augmented feedback does effectively 'guide' the learner to perform properly however by using feedback as a guiding source the learner develops a dependency on the availability of the feedback and will often give a poorer performance without it. This leads to augmented feedback becoming a crutch for the learner that is essential for performing the skill (Magill, 2007). Vygotsky's theory of ZPD or Zone of Proximal Development promotes the idea of a novice performing a range of tasks that they cannot accomplish on their own, but with the help of an expert are able to perform. The emphasis is on the collaboration and eventual shared understanding that develops between the expert and novice. This process of shared understanding is called an inter-mental process and is an essential step in the process of internalisation as the expert gradually removes assistance and transfers responsibility to the novice (Vialle, Lysaght, & Verenikina, 2005). The danger with teaching in the ZPD is that if it is not used properly it has exactly the same effect as that of augmented feedback where the ZPD simply

becomes an instructional technique that systematically leads the novice with the help of the expert through a series of actions that eventually lead to a set of skills (Vialle, Lysaght, & Verenikina, 2005). The main purpose of the ZPD should be to encourage self-directed and independent learning.

A research project conducted by Burwell (2005) in the UK looking at how instrumental and vocal teachers in higher education approached the development of student independence, took the form of a case study using an interpretative and descriptive approach. The analysis was made of the verbal dialogue that took place between teachers and students. This was cross-referenced with information about the characteristics of participants, examination results, and final degree classes. A relationship emerged between the ability of students and the proportion of student talk. Stronger students talked more. The analysis of verbal transcripts showed that instructions were often posed as questions in order to soften the commanding impression they might give, others were often rhetorical and did not require a response. Some of the questions were interrogative or fell into previously established patterns and the student response was automatic rather than considered. For example questions like 'are you happier with that?' Very rarely were questions exploratory, requiring the student to develop their own thoughts. Sometimes even after posing an exploratory question the teachers would answer it themselves thereby guiding the student rather than having any meaningful dialogue about the problem and how to solve it (Burwell, 2005). This was an important paper for the development of the model in the present study as it gave good ideas about how to organise the discussions in class in a way that did not allow students simply to react automatically and without reflection.

Pilot Study

The pilot study was designed by Latukefu and Nicholls-Gidley and conducted across one 13-week term during 2005, within the music department of UOW, in

order to evaluate the effectiveness of the collaboration in teaching between spoken voice and singing. Students were asked to anonymously provide information that was collected and tabulated into 4 recurring themes. The information gathered firstly described the most important or effective and the least effective techniques the students had learnt through studying both singing and speaking. Secondly, a questionnaire was administered through which the students reported any previous training in either singing or speaking. Thirdly, students kept personal reflective journals as part of assessment in class and these journals were collected and analysed. Twenty-nine first year students took part in the pilot study and 2 teachers. 14 students had previous singing training, 7 students had training in singing and spoken voice, 2 students had training only in speech and 6 students had no previous training in singing or speech.

Students were asked to describe a powerful learning experience during their course at UOW in singing and spoken voice class that had affected their understanding of singing or spoken voice. They most frequently mentioned:

- Learning the science of voice points of resonance helped both speaking and singing voice production
- Learning to resonate the voice without effort
- Understanding the link between body tension and its effect on speech or singing and
- Learning to release tension

Tension and constriction inhibiting vocal production were themes that all students reported. The most helpful aspects of vocal training mentioned for both voice and singing were:

- Fitness, relaxation, tension release exercises (62% of students)

- Breathing exercises, the idea of airflow, resonance (52% of students)
- Gaining confidence through understanding the mechanics of voice (41% of students).

When asked what they found least helpful, the students with no prior training said everything had been helpful and useful. Some critical comments from those with previous training included:

- Not having enough explanation of what exercises were for, or how they helped
- Needing more individual attention to identify problems
- Lacking the background to understand some topics in theory, harmonics and technical aspects

Some of the key points were:

"finding exercises used in speech training such as release of constriction in the throat, and in singing such as breath control, useful for both voice and singing"

"Training in one helps with understanding the other"

" Being able to pinpoint areas of my speaking voice or singing voice, which need assistance"

"Different techniques help you find out what works for you."

A quote from one of the student's reflective journals showed just how much the students were integrating the spoken voice work with the singing classes. This was written after the pilot study was concluded, but it illustrates a developing ability to adapt to a variety of performance context characteristics. She was transferring the vocal skills of anchoring, release of constriction and twang learnt in spoken voice class and applying them to her singing with what she perceived to be good results.

I warmed up as usual and sang through two songs, Auf Eines Altes Bilt and Ave Maria. I had to keep going back to my sirening because I found my voice quite tired and less responsive than usual. I focussed on energising more, and keeping an open throat and giggle posture, especially in the higher parts of the songs. I practised using anchoring that we learned in spoken voice, particularly on the high notes, and found this quite difficult because of the isolations of the body required. While creating stability in the core of my body, I had to be careful to retain an open throat and avoid constriction. Also my breathing – while activating my back muscles, I had to be careful not to clench and strain my tummy muscles and keep my breath flow consistent. In spoken voice class we learnt about “twang” and practised it. L (singing teacher) was there and C (voice teacher) talked about using it in singing, just enough so as to create less strain on the voice, but so it doesn’t turn nasal. The difference was amazing in our speaking voices and the ease with which volume was created by using natural twang was incredible. (2006)

The results from the 2005 survey showed that the majority of students (82%) welcomed the present method of teaching singing and voice. Only 41% however felt that learning the mechanics of voice helped them gain confidence in singing, which suggests that they preferred the experience of practical learning to the theory. As Daniels (2007) reminds us, Vygotsky argued that it was not possible to transmit concepts directly to students.

Pedagogical experience demonstrates that direct instruction in concepts is impossible. It is pedagogically fruitless. The teacher who attempts to

use this approach achieves nothing but a mindless learning of words, an empty verbalism that stimulates or imitates the presence of concepts in the child. Under these conditions, the child learns not the concept but the word, and this word is taken over by the child through memory rather than thought. Such knowledge turns out to be inadequate in any meaningful application. This mode of instruction is the basic defect of the purely scholastic verbal modes of teaching, which have been universally condemned. It substitutes the learning of dead and empty verbal schemes for the mastery of living knowledge (Vygotsky, 1987, p. 170) in (Daniels, 2007).

An extract from another student journal illustrates this point:

The term that has been bandied around this session in relation to this is ‘anchoring’, something I mentioned briefly in my journals last session:

I did my usual trick of pulling out Singing and the Actor (Kayes, 1993) and looked up the chapter on anchoring. However, it has gone a little over my head and I feel it is something I need to go through with someone who is good at voice when everyone is less busy.

I’ve revisited this chapter this session to try and keep up with the other students, however I am still struggling with the content (which I am finding frustrating as it is usually the theory that helps me through). So having struggled with the content I have been unable to apply it to my singing. However, the simple act of L or C pushing me off balance in class on numerous occasions has helped me begin to gain a better understanding of how much physical effort is required. In the first couple of weeks, L would push me off balance and then

move on; however, in the technique class in week four she continued to push me until I corrected it, which forced me to actually take a second to think, ‘how can I stop her pushing me over?’ (2007)

This student found that simply reading the theory of anchoring was not that helpful to actually being able to anchor, however when an exercise was used in class by the voice teacher and then reinforced in singing to demonstrate anchoring, the combination of what she had read plus an exercise that made her use the correct muscles helped her understand what she needed to do to achieve anchoring or support. Vygotsky wrote about spontaneous concepts, which in this case are concepts about singing the student has acquired throughout their lives by simply singing. Sometimes a singing student has had lessons, but the teacher may not have taught any scientific concepts and instead may have simply worked through trial and error to try and improve the student’s singing as each novel song appears. In this case students often make up their own explanations as to what they are doing, which may not be based on theory. For example at the beginning of first year I ask students to describe to me how they sing. Most of them are at a complete loss. I have heard many students describe the way they sing by saying they breathe from their diaphragm and then use their diaphragms to support singing. However over three years with the introduction of scientific concepts that become part of their everyday thinking, the students acquire an awareness of what is happening to them as they sing and an ability to articulate this very clearly.

My own experience of how helpful it was to have the voice teacher’s perspective when teaching can be seen in the following excerpt from my own teaching journal:

C (voice teacher) came to class today and worked with Barbara (pseudonyms are used). Barbara has a huge operatic sound,

which is much more mature than you would expect from someone her age and shows some worrying signs of things not being quite right. There is creakiness in the sound and also a bit of a wobble. Her pitch is often flat and singing always seems like such an effort for her that it is distracting from the performance itself. Also she does not glide smoothly when changing pitch or register, but tends to have a rather lumpy line. Mostly she sings loudly and without a lot of vocal colour change. I can hear this and we have tried different strategies to try and improve, but nothing seems to stick. C. Immediately asked her to stop trying to drop her larynx and instead sing using a soft twang. Barbara found this almost impossible as first, which was really interesting to me, as I have noticed her tendency to sing loudly. She could not sing softly and employ twang. Finally she got it and the change in her sound and performance was breath taking. For the first time she was able to sing freely, pitch was centered, there was no sign of wobble and she still projected beautifully. Also the creaky sound that was caused by pushing and therefore constricting disappeared altogether. She was finally able to concentrate on the meaning of the text and the character and it was the first time that her voice and the effort of producing her 'sound' was not a distraction to the audience. I had not thought of this as a strategy probably because my own opera training with low larynx position is so strong. I was really happy that C had been able to help her so easily and she did it in a way that did not threaten me at all. She worked as a speechie not a singing teacher and I think this was really thoughtful of her.

The pilot study carried out in 2005 found that students who came in with no prior training were more open to learning and new experiences. Some of those who had had a lot of prior training, although more advanced when they arrived found it more difficult to cope with new information. They were more aware of the complexity of the task and required more explanation from the teachers to make sure it was worthwhile making changes. They experienced difficulty in undoing muscle memory, and it was seen as important to help them feel positive about any necessary changes, without feeling bitter or resentful. Many of the students entering the course at undergraduate level reported chronic constriction and therefore need time to learn how to release that constriction.

The development of an alternative learning model necessitates a cyclic process of intervention, reflection and evaluation. Every iteration of the design cycle helps to refine the model, however unlike a lab experiment where the environment can be controlled and kept stable the reality of university life means that extraneous circumstances can affect the design and development. For example in 2006 we had a change of staff and a new voice teacher was appointed, which meant adjusting the design to take into account her approach to voice.

Outcomes

The results from the 2005 pilot study prompted an even greater collaboration between the spoken voice teacher and the singing teacher and each week the teachers meet to discuss the progress of students. The pilot study also prompted a longer project that seeks to understand the kinds of strategies students employ in order to achieve improved performance. One of the strongest themes to emerge from the pilot study was that students found scientific concepts about the voice were helpful to them and this has informed the design of the model being developed. This new study will investigate and critically reflect on the actor/singer student behaviour and practices in a socio-cultural pedagogical environment and

the implications this may have for the positioning of socio-cultural theories in vocal pedagogy.

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