

Asserting the Meta-Cognitive Aspect of Choral Pedagogy

Music learning involves a rich inter- weaving of psychomotor, affective, and cognitive domains of knowledge. However, I propose that focusing primarily on the cognitive dimension of music learning is the most effective route for producing an articulate, holistic, yet objective set of assessment criteria and shared academic language for the field. –Hanna (8)

When working with a choir at any level, the conductor's pedagogy aims to create an experience for the singer. That experience may be of increased resonance, a coordinated onset, a certain emotional affect, or other desired goal. For the conductor, who is a teacher, there are three points of entry outside of gesture he/she may use. These are affective language, cognitive facts, and psychomotor/kinesthetic actions. Every singer/student will react differently to each, and may learn better, or achieve the desired experience through one type of "in road" over another.

In general music education, most teachers are aware of the Dalcroze, Kodály, and Orff methods of instruction. Each of these promotes experiential learning, emphasizing participation before concepts. Generally, students/singers of most ages will characterize a concept through action first. This is followed by a visual understanding, or iconic representation, and finally through cognition or symbolic understanding (Gault). Effective instruction also occurs this way in the choral ensemble. Conductors strive for their students to engage in experiential learning, and pair that with a conducting gesture, however many stop at the first or second step and neglect the final step: conceptual learning. As conductors, and especially as educators, this omission derails the acquisition of pedagogical objectives by our singers/students. This leaves both the students/singers and the conductor/teacher in a little or slow-growth environment, a conductor/teacher-centric classroom, and devalues the field educationally.

In Bloom's initial taxonomy (1967?), the authors classified educational objectives in the three areas of cognitive, affective, and psychomotor/kinesthetic. The cognitive area dealt with "the recall or recognition of knowledge and the development of intellectual abilities and skills". The affective dealt with "changes in interest, attitudes, and values, and the development of appreciations and adequate adjustment". And the psychomotor dealt with "the manipulative or motor-skill area" (Hanna, 8). Music, or singing did not appear to fit into just one of these areas, but could not claim them all in totality.

The revised taxonomy for cognition (2001?) includes significant changes that include both listing objectives in verb-form, because we are doing something, and in progressively higher orders of complexity, because knowledge is cumulative (Hanna, 14). The affective and psychomotor domains have not received such revisions as the cognitive domain captures the bulk of educational areas (math, science, language, etc.). The new objectives, in order of complexity are Remember (recognizing, recalling), Understanding (interpreting, exemplifying, inferring), Apply (execute, implement), Analyze (organize, differentiate), Evaluate (check, critique), and Create (generate, plan, produce). Music/singing can now claim a place in this

domain. In choral pedagogy, conductors first teach their singers/students to recognize, or recall an experience (Remember). They want their singers/students to internally classify, compare, or interpret this experience with their previous knowledge (Understand). Next, they require their singers/students to execute or implement the knowledge from the experience (Apply). Most directors would stop here. There are, though, three progressively complex objectives left unexplored. This is why singing, and music making, is, or has the potential to be, a meta-cognitive field. Meta-cognition simply means “thinking about one’s own thinking” and is necessary for the Analysis, Evaluation, and Creation aspects of Bloom’s cognitive domain (Hallam, 27). In the following quote, Hanna explains how the first Music National Standard fits into the new taxonomy:

The main objectives are to “sing accurately” in the “full range of the voice” and with “breath control”. Alone and in a group and a varied repertoire are further requirements of the standard. Singing is the verb that indicates the cognitive process involved. Singing is a type of cognitive process related to the Apply category because it is the “carrying out of an action”. It also can be classified further in the subcategory executing because it is “applying a procedure to a familiar task”. The nouns, “breath control”, “range”, and “accuracy” indicate knowledge of correct Procedures, and pertain specifically to “subject specific skills, techniques, and methods”, in this case, singing. Therefore, national standard 1a is placed in the Apply and Procedural cell of the taxonomy grid (Hanna, 9).

Most choral conductors would like to go beyond this compulsory description of singing. A richer choral experience requires more. Meta-cognition can also include “thinking of what one knows”, “what one is currently doing”, or “what one’s current cognitive or affective state is” (Hallam, 27). Most conductors would like their singer/students to engage in this behavior. In fact, research suggests that musicians need these meta-cognitive skills to recognize the nature and requirements of a desired experience, have a set of strategies for approaching the task, know which strategy would be appropriate for the experience, monitor progress towards achieving the experience, adjust strategies as circumstances change, evaluate the resulting experience in performance, and take action to improve next time (Hallam, 28). These skills can, and should be taught by the choral conductor/teacher. They can be addressed cognitively, affectively, and kinesthetically/psychomotor. I assert, however, that when teaching cognition, cognitive concepts should always be included.

So what does this look like? Researcher Hallam interviewed a set of professional musicians (study information). These musicians demonstrated much meta-cognition while preparing for performance in the aspects of understanding technical matters, issues of interpretation, and issues of learning like concentration, planning, adjustment, and evaluation (Hallam, 27). These musicians were self-aware of the strengths and weaknesses. They understood their individual level of technique and what was required by the compositions. They knew various strategies for accomplishing various tasks including interpretation, performance, and technical matters (Hallam, 29).

When practicing, a few standards emerged. All musicians agreed on the importance of either analyzing the piece (for issues of technique, interpretation, etc.), or slow, meticulous playing. After the initial learning phase, practice consisted of either repetition or further analysis, both a cyclical experience-evaluating actions. The goal was generally a Creation, or production for performance (Hallam, 31).

When we work in an ensemble situation, these are sought after skills for both the conductor/teacher and the singer/student. The simple fact is that if conductor/teachers want their ensembles to grow beyond a superficial, top-down system, they must encourage meta-cognitive development in their ensemble. For most of us, we receive our singers/students post-elementary. This means that they already have a semi-established lexicon for worlds like pulse, beat, pattern, and many affective terms like smooth, rigid, bubbly, etc. The benefit is that the conductor/teacher needs only apply the meaning of their established lexicon to music. We can expect a higher level of concentration and understanding from students as they age, even using more adult vocabulary and concepts even if the skill level is low (Kim, 146). The down side is that many times, the established lexicon older students bring with them often differs greatly from the conductor/teacher. According to Kim, "among educational, musical, social or psychological factors, psychological factors were listed most often as having a great impact on the adult learners' self concepts and musical achievements" (Kim, 143). This means that we need to clarify our own understanding of concepts and goals, and learn better how to communicate them. I support a cognitive approach as it leaves less room for error than affective or kinesthetic, however a combination of all three would probably work best. Gault proposes that teachers' knowledge of their own strengths is crucial and should incorporate into their mode of instruction (Gault).

I would also go further, however, in stating that I believe all three domains, cognitive, affective, and psychomotor/kinesthetic, can be approached from the meta-cognitive realm, or at least informed by it. Conductors/teachers thereby strengthen this crucial skill area and are able to effectively instruct a variety of learners. In the psychomotor/kinesthetic domain, I promote methods like Alexander and Feldenkrais technique. They are meta-cognitive in approach in that the singer/student is developing a kinesthetic image of him/herself so that they more accurately and more completely know what they are doing (Nelson, Blades, 146). As unwanted tension is the nemesis of healthy singing, practicing these methods of kinesthetic development allow singers/students to notice excess tension before it becomes a problem (Nelson, Blades, 149). As conductors/teachers, we want empowered, knowledgeable, self-actualized singers/students.

Rather than simply telling the singers/students to throw their arms up over their heads to keep the sound alive/lifted (affective words), have them yawn slowly a number of times. Next, give them the cognitive fact that their soft palate is lifting, their larynx is descending, and even though they can't feel it, their pharyngeal walls have tightened. Let them feel it, experience then sensation slowly. If they still aren't getting it, then have them throw their arms over their heads a couple of times. Techniques like Alexander and Feldenkrais incorporate a lot imagination of motion, slow and gentle movement, and complete imagination and awareness of a task.

We can also apply this to the affective domain. Previously stated, older beginners come to the ensemble with an established psychological awareness of music and their relationship to it. When conductors/teachers use affective terminology like “open throat”, “spooky sound”, or “ringing”, they are trying to convey an aural image. They want their singers/students to audiate. This is a meta-cognitive skill. The brain is attaching meaning to a musical sound by hearing and understanding music in one’s own mind when the actual tones are not present. By creating a shared meaning, the goal of affective language, singer/student and conductor/teacher develop a vocabulary within the musical language (Hanna, 14).

Instead of throwing out affective jargon, the conductor/teacher must first understand that their aural image of that jargon will probably differ from the singer/student’s. He/she must then either model the desired experience, play a recording of the desired sound, and then, most importantly, have the student/singer audiate the music in order to re-establish meaning. Results may vary. This is the biggest problem with the affective domain; it will almost always feel like throwing darts.

The benefits of approaching choral pedagogy from the cognitive/meta-cognitive domain are many. First, as there is an infinite amount of affective and kinesthetic terminology conductors may throw out, there is a finite amount of cognitive information pertaining to singing. The meta-cognitive skill building and growth however may be infinite. Our vocal mechanism can do a lot, but comparatively less than our imaginations. By including cognitive information, and approaching pedagogy meta-cognitively, the choral ensemble will achieve a linguistic common ground. This provides for a more efficient, transparent, and productive rehearsal. Second, using cognitive language empowers the singers/students. They are able to engage meta-cognitively and make choices about how they use their body. They can be asked, “What do you know about singing?” and give an informed answer. In addition, students/singers can self-monitor and self-diagnose vocal deficiencies, or even offer suggestions to the conductor about how they produce their wonderful sound. Third singers unfortunately operate blind to the physiology of our instrument. Using only descriptive language or secondarily related motions further disconnects our brain and body from its instrument. Techniques like audiation, Alexander and Feldenkrais incorporate the other domains without straying from the cognitive aspect of singing. By choosing to use cognitive language as the basis for your communication with choirs, conductors reinforce a direct, real, verifiable, factual, connection to their instrument.

Attached below is an incomplete index of affective, cognitive, and kinesthetic information. Preceding that are sample flowcharts of the possible meta-cognitive process used in choral pedagogy. In each case, I am assuming that the chosen method is successful. When it is not, it is up to the conductor/teacher to adjust his/her strategy along the same chart or attempt a different domain. He/she must re-engage in the meta-cognitive stage and reflect upon how to achieve the desired experience. More research should certainly be done, and new methods should be explored.