

Toward a pedagogy informed by research about the boy's changing voice

El desarrollo de la voz masculina durante la adolescencia: una pedagogía basada en la investigación

Patrick FREER, PhD. Professor. Georgia State University. USA (pfreer@gsu.edu).

Alfonso ELORRIAGA LLOR, PhD. Lecturer. International University of La Rioja (alfonso.elorriaga@unir.net).

Abstract:

The changing voices of adolescent boys have been included within the broad aims of vocal music education during mid-20th century. During these years, teachers gradually shifted the focus of their work from detailed representation of their own teaching experiences to increasingly rigorous research studies. This research has collectively yielded many findings important for choral teachers and their students. With this knowledge, choral teacher-conductors can confidently guide all boys with all kinds of differences. Ultimately, the goal is that these boys understand their own voices and expand their musicianship, so that they can partake in choral singing throughout their lifetimes, whenever and wherever they choose.

Keywords: Choral singing, boy's changing voice, adolescence.

Resumen:

Las voces en desarrollo de los adolescentes masculinos se han visto incluidas dentro de los amplios objetivos de la educación de la música vocal a partir de mediados del siglo XX. Durante estas décadas, los profesores cambiaron gradualmente el foco de su trabajo, desde la representación detallada de sus propias experiencias docentes, hacia la consecución de distintos estudios de investigación, cada vez más rigurosos. Esta investigación ha generado colectivamente muchos hallazgos importantes para los educadores corales y sus estudiantes. Con este conocimiento, los docentes musicales actuales pueden guiar con confianza a todos los chicos hacia la práctica coral. En última instancia, el objetivo es que estos muchachos comprendan sus propias voces y mejoren su musicalidad, para que así puedan participar en distintas actividades relacionadas con el canto coral a lo largo de su vida, cuándo y dónde quieran.

Descriptores: Canto coral, muda de la voz, adolescencia, chicos.

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463 EV

1. Foundational information about adolescent boys and singing

The changing voices of adolescent boys have existed since the dawn of humanity, yet their incorporation within the broad aims of vocal music education took on new life in the mid-20th century. During these years, the foremost contributors to the conversation were Duncan McKenzie (1956), Irvin Cooper (1965), and Frederick Swanson (1977). These teachers gradually shifted the focus of their work from detailed representation of their own teaching experiences to increasingly rigorous research studies. This shift from experiential to objective data prompted vigorous debates between Cooper and Swanson that spilled onto the pages of the *Music Educators Journal* and other print sources (Freer, 2008). John Cooksey's work then followed with an examination of the commonalities among existing theories and data, concluding in a decades-long series of highly regarded research studies (see Cooksey 2000a, 2000b). Cooksey's research drew upon a broad cross-section of boys, including boys with little or no prior experience with singing and those who experienced difficulty with phonation as part of the voice change process. Cooksey's focus on the general population of boys with changing voices, not solely the changing voices of boys who sing in choirs, is an oft-overlooked yet critically important aspect of his contribution to research (Cooksey, 1989).

This research has collectively yielded many findings important for choral teachers and their students. For instance, male puberty begins as early as age 9 and as late as age 14, and the onset of puberty

is trending younger over time. A recent study of over 4,000 boys found that male puberty now begins, on average, during the 10th year of life — up to two years earlier than in the 1980s. All normally healthy boys pass through the five stages in a sequence that is predictable, even though we may not notice all five stages. Each stage is characterized by a period of growth followed by a period of stabilization. When boys enter a new stage of voice change, the most apparent shift is the appearance of newly gained lower pitches. These lower pitches are just part of the overall change process. The most reliable indicator of a stage of voice change is the total range of the singing voice, excluding falsetto (falsetto begins to emerge in the third stage of change). There is some anecdotal evidence that voices that change rapidly are likely to become basses while those that change slowly or begin late will become tenors. All male voices go through all stages, but some «rebound» to a higher pitch level after the final stage, resulting in the adult distribution of tenor and baritone voices.

Teachers should know that while voice training cannot alter the stage of change, it does assist boys in building the musculature that will support their singing during the change process. Boys may seem as though they sing an octave lower than desired when the reality is that the boy is singing correctly. Generally, the apparent low-octave singing either an auditory issue of the teacher (not the student) who hears the pitch an octave lower than it really sounds, or the student simply sings at the bottom of his range because he is imitating a teacher who sings at the bottom

of his/her range. Research indicates that vocal modeling is more about production than pitch (Hendley & Persellin, 1996).

A common issue during the voice change is when the vocal apparatus produces a substantially different pitch than was intended. This vocal «cracking» is simply a byproduct of laryngeal muscles growing at different rates. Excessive vocal cracking can be expected in boys who have had minimal singing experience, continue to use the same singing techniques as before puberty, and/or continue singing mostly in head voice/falsetto after the voice is capable of lower pitches. Another issue is that some boys seem to have gaps in their vocal range where they cannot phonate. Recent research indicates that this is most common toward the end of vocal change as boys gain weight at the end of the peak of puberty (Willis & Kenny, 2008). Some boys experience the effects of changes in the auditory system during adolescence. Some boys, for a period of time, temporarily cannot distinguish between different pitches during this period. Research indicates that this is temporary (Demorest & Clements, 2007).

What did the efforts of these teacher-researchers have in common? They confirmed that the adolescent male voice change occurs in a predictable series of stages, but in a timeframe that is not predictable or uniform. Each concluded that multi-part repertoire is required, and that teachers need to know how to work with boys at each step along the change process. McKenzie, Cooper, Swanson, and Cooksey each addressed distinct aspects of the boys' changing voice, studied starkly dissimilar populations of boys,

and made use of increasingly sophisticated research technologies to yield detailed information about the vocal physiology of adolescent males. With this knowledge, choral teacher-conductors can confidently guide all boys with all kinds of differences. Ultimately, the goal is that these boys understand their own voices and expand their musicianship, so that they can partake in choral singing throughout their lifetimes, whenever and wherever they choose.

2. Recent research about boys and singing

If we want to teach young people about their voices and choose musical activities that are optimal for these adolescents, then we need to be knowledgeable about what vocal change involves and the challenges it presents. This section focuses on a few of the more recent research findings about adolescent boys and singing.

Some research has confirmed that vocal training during the voice change may delay the progression of the voice change or at least minimize the vocal difficulties associated with it (Fisher, 2014). Even so, many choral teachers are unaware of either the biological or sociological differences between adolescent boys and girls, and are therefore unable to differentiate instruction accordingly (Campbell, 2016; Warzecha, 2013; Wicks-Rudolph, 2012). This lack of vocal pedagogy is a major factor in the self-labeling of many adolescent boys as «non-singers» (Graf, 2016; Stephens, 2012). Some boys who found success as sopranos during childhood try to retain that singing quality during and

following the adolescent voice change, leading to *puberphonia*, a medical condition wherein an older adolescent or adult male is unable to speak or sing using his changed voice (Kothandaraman & Thiagarajan, 2014). Several studies have concluded that choral teachers ought to foreground the study of vocal technique, using repertoire as practice material (e.g., Gebhardt, 2016; Simpson, 2013).

Researchers have found that once boys are enrolled in choir, they are unlikely to withdraw because of the voice change alone (Fisher, 2014), though they occasionally find themselves assigned to an inaccurate voice part, such as a baritone who is assigned to the tenor part or vice versa (Nguyen, 2015). Still, once boys value themselves as singers and are committed to the art of singing as a normal and normative activity for males, they find ways to resist and subvert societal norms traditionally associated with male singing (Beynon & Heywood, 2014). Other researchers have explored the singing identities of adolescent males in relation to instruction about vocal improvisation (Hirschorn, 2011), and within the general music (non-choral) classroom (Willow-Peterson, 2016).

3. Two pedagogical implications for teachers

This section describes two broad pedagogical implications of current research concerning the adolescent male changing voice. First, we will consider how vocal instruction can take place within the warm-up component of choral rehearsals. Then, we will consider how to begin vocal in-

struction with boys who are in the midst of change and/or are reluctant to sing at all. In any case, one principle remains constant: When we are able to relay our knowledge of the change process in terms they understand, boys know what to expect and can eagerly anticipate the next steps in their vocal development.

Adolescence encompasses the years during which each individual forms his/her adult personality, basic values, and attitudes – those things that determine one's behavior. If we want a person's behaviors to include participation in singing and choral music, we need to provide students with the knowledge and skills to sing successfully through adolescence and into adulthood. There is increasing evidence that adolescents who view themselves as unsuccessful singers will only rarely seek choral music experiences in adulthood. Adolescent boys undergo a more dramatic vocal maturation process than adolescent girls, and this may account for the declining number of adult males who sing in choirs worldwide – the so-called «missing males» phenomenon in choral music. Students view themselves as unsuccessful when they experience embarrassment while singing, are asked not to sing because of their changing voice, or are not given opportunities to sing in choirs. It is the student's perception of these issues that is most influential in future decisions about participation in musical activities.

Changing voices are affected by many easily overlooked musical issues. For example, boys, usually «tenors», who have been reading pitches from the treble staff for years are suddenly presented with

the conundrum of singing those pitches an octave lower than they are printed. «Baritones» may have to learn to sing in a completely new clef – the bass clef. Also, the standard warm-ups at the beginning of the rehearsal may need to be adapted for changing pitch levels.

4. Choral warm-ups as group voice lessons

The following are some key points about warming up choirs with changing voices. Warm-ups are singing, and the unison singing that won't work for repertoire won't work for warm-ups. The composite unison range of any adolescent school choir is approximately a sixth, from G to E in octaves. Even when beginning with a pitch that every student can sing, any Do-Mi-Sol vocalize will have left some students behind after the third ascending repetition.

At the most basic level, a choral warm-up is a sequence of activities focused on the coordination of vocal skills in preparation for the challenges of a specific rehearsal. Key components of a successful warm-up session for young adolescents include a logical sequence that remains consistent from day to day, an allowance for student choice and experimentation within the procedures, a clear pedagogical relationship between the tasks of the warm-up session and the repertoire to follow, and an allowance for a variety of student groupings, bodily movements, and physical locations within the warm-up session.

There are five sequential stages of an effective choral warm-up session. Begin-

ning with relaxation, teachers should use imagery encountered during daily activities such as the weather, getting ready for school, sporting events, etc. Teachers might ask students to act out some actions that stem from these ideas, such as shivering, wiping sweat off of the brow, opening and closing an umbrella, and so forth. Carefully chosen physical activities will both relax the musculature of the students and gradually draw their focus toward following the directions of the teacher. These are essential for the effective functioning of a choral ensemble.

Following relaxation activities, students will be ready to focus on their alignment, or physical posture. Some choral conductors insist on strict posture for singing, but the extreme variations in adolescent bodies makes this impractical. Rather, focus each singer on his or her own optimal posture by drawing their attention toward areas of the body that are in or out of alignment. For example, «standing proudly like you've just won an Olympic medal» may achieve a better outcome than a set of rules and restrictions about correct posture.

The establishment of an optimal physical alignment will then make breathing easier. Choral conductors should always remember to have students exhale before inhalation. If they do not exhale first, an excess of air may accumulate in the lungs, resulting in a raised chest and shoulder position. Rather, use a motion such as an underhand softball toss where the toss is the exhalation and the wind-up is the inhalation. This motion also both relaxes the shoulder muscles and reinforces the concept of breathing low in the body.

There is one more step before the singing of vocal exercises begins. Students need to coordinate their breath flow with their vocal mechanism. This can begin by having students hum on a pitch of their own choosing. This will accommodate voices at all stages of change. From a pitch in the middle of the range, have students descend in pitch before ascending. This will gradually «invite» the breath and vocal folds to work together before the coordination necessary for singing specific pitches and rhythms.

Vocalizes can be finally be introduced as the final step. These vocalizes may not always be sung in unison when there are many different voice parts represented by the students. Look for ways that students can achieve the intended goals even though they don't sing on the same pitch. One approach is to have students sing a national song or folksong starting on a pitch of their choice. The result may sound like cacophony, but it's also a challenge for students to maintain their own part while others are singing something similar but not identical. For all sequences of vocalizes, it is wise to gradually move toward higher pitches, to gradually sing at louder volumes, to gradually increase the speed of singing (especially when there are leaps and skips in the exercise), and to end with a calming vocalize that relaxes the voice into the lower range.

Some choral teachers find it helpful to repeat a vocalize when they get to the moment in rehearsal where that vocalize would help students with a musical passage in the repertoire. This will help students understand the relationship between the vocal techniques experienced in

the warm-up process and the technique used to sing passages in their repertoire. The choral warm-up sequence presents an opportunity for teachers to teach skills and present solutions to problems that will arise as students learn their repertoire. In other words, the warm-up process offers an opportunity to *prepare* for the rehearsal to follow.

5. Approaching vocal technique with adolescent boys

The vocal challenges of adolescent boys with changing voices are well documented. We know the stages of male vocal development, the singing ranges that accompany those stages, and much of the sociology and psychology that influences the likelihood that a boy will continue singing during this period (e.g. Cooksey, 2000a, 2000b; Freer, 2016). We often don't know how to gain the trust of boys who are reluctant to sing during their voice change (Hollien, 2012; Thurman, 2012).

Research tells us that adolescent boys crave control (Freer, 2011, 2012). They seek to control their voices while singing just as they are fascinated by the physical control that results from the developing musculature throughout their bodies (Freer & Elorriaga, 2013; Freer & Tan, 2014). After all, singing is a physical, athletic activity that draws upon muscular coordination and its related bodily sensations. We often begin our work with adolescent male singers by focusing on matching pitch and identifying vocal range and tessitura. This is not always optimal, and it is frequently futile and frustrating for both singer and teacher.

We must redefine our work with these boys away from an emphasis on pitch, repertoire, and performance. Instead, we can embrace boys' need for physical control by orienting our instruction toward vocal technique. When boys are able to confidently meet the musical challenges presented to them (i.e., sing the repertoire), they are more likely to continue singing because they view themselves as able to exert a measure of physical control over their rapidly developing musculatures (Fuchs, Meuret, Theil, Täschner, Dietz, & Gelbrich, 2009). Once they have experienced success in singing, boys feel more comfortable singing in choral ensembles and public performances. Jackie Wiggins has written about the need for music teachers to find «doorways in» where students seamlessly pass from one room (what they know) to the next (what they need to know). Wiggins states that «doorways in» help teachers «create lessons that will maximize student understanding of the music and of the ways in which music operates» (2009, pp. 70-71). Randall Allsup (2003) has drawn upon the arts education philosophy of Maxine Greene as he has similarly written of our need to create «opening spaces». These metaphorical spaces provide opportunities wherein «students and teachers are free to define and redefine who they are, where students can come together to speak (or perform, or sing) about a common world» (p. 165).

How, then, do we begin the process of teaching vocal technique to boys? Much of the professional literature emphasizes a pitch-related approach. Instead, the «doorway in» often lies in the precursor to

phonation itself: breath control. The word «control» is key here, since singers can control the processes of exhalation and inhalation. A quick Internet search reveals that the term «breath control» is broadly used throughout the professional literature in a wide array of settings and contexts. While it is common in our specific discipline of vocal-choral music to instead use the phrase «breath management», management implies control. If control is what boys seek, then let's give them a sense of control over the respiratory process that is the foundation for all genres and styles of singing. We need to shift from thinking of ourselves as choral music teacher-conductors toward thinking of ourselves as singing teachers who use choral literature to help students practice and refine the vocal techniques they have learned. Yes, it's a bit like a game of semantics, shifting subtly from «choral music teacher» to «group voice teacher». But, the shift is completely aligned with how adolescent boys learn and build positive images of who they'd like to become in the future.

There are many reasons for beginning with a focus on breath; five of them are listed here. They are equally relevant for male and female singers. The point is that breath control is the logical place to begin the exploration of vocal technique for boys with changing voices — rather than beginning with pitch matching. Female singers obviously need to breathe, too, and these reasons are equally true for them.

First, the vital capacity of the lungs — the maximum amount of air that can be expelled — increases concurrently with the adolescent boy's adolescent voice

change. Expelling the air begins with a contraction of the abdominal muscles. Instead of asking students to «exhale» or «breathe out», we can more specifically ask students to «contract your abdominal muscles». We can lead students to notice how much air they can expel. This is often a surprise to them, and we can tie the physical sensation to the concept of sustained breath flow for musical phrasing.

Second, the rate at which air is expelled is controlled by the rate at which the abdominal muscles are contracted; this has a direct effect on dynamics. Instead of exhorting students to «sing more loudly» or asking for a decrescendo, we can ask them to vary the speed of the airflow by varying how they contract their abdominal muscles as they exhale. Players of woodwind and brass instruments learn these techniques early in their training, and many of the boys in our vocal/choral music classes will be familiar with the principles.

Third, we know that inhalation follows exhalation. The process of exhalation creates a vacuum in the lungs. Inhalation is a response to that vacuum. Drawing students' awareness to breath control is easiest when they are asked to notice something that they are already doing. So, focus on inhalation after exhalation rather than asking students to «take a deep breath» without first asking for a conscious exhalation. Students will be able to notice how their abdominal muscles expand as they inhale and that the inhalation process can be slow or rapid. This approach achieves the intended goal of singing «from your diaphragm» but is more immediately effective since the ab-

dominal musculature can be voluntarily controlled and diaphragmatic control is involuntary.

Fourth, a sustained and controlled airflow during exhalation is necessary for efficient phonation. The edges of the vocal folds are drawn together during exhalation to produce a pitched singing sound. The more that adolescent boys can create a steady airflow through conscious control of their abdominal musculature, the more that they will increase the opportunity for easy phonation on the pitches they intend to sing. The length and, to a lesser degree, the thickness of the vocal folds change during adolescent male development. Vocal-choral teachers can build on students' awareness of airflow during exhalation to begin discussions of phonation, changes to the vocal folds, and the resultant changes to singing pitch during adolescent development.

Finally, concepts of vowel shape, consonant production and pharyngeal space become more tangible if singers think of how airflow interacts with the articulatory structures of the mouth (tongue, teeth, soft palate, etc.). What begins as airflow into the body during inhalation is transformed into sound waves during exhalation/phonation. Still, air passes outward through the pharynx and oral cavity during singing, and vocal-choral teachers can speak about «shaping or interrupting the airflow» as a way to enable understandings of vowels, consonants, and resonance.

Teaching vocal technique to adolescent boys in the midst of voice change may seem like an oxymoron. How is it

possible to teach principles of technique when the voice is changing, sometimes in seemingly unpredictable ways? Breath control is perhaps the most reliably stable component of vocal production during the adolescent vocal development. Breath control is exclusive of pitch, vocal register, timbre, and music reading skills. Breath control is relatively silent, allowing boys to experiment on a component of vocal technique without risk of embarrassment or failure. When boys are made aware of the muscular activity behind exhalation and inhalation, they can experience an immediate change of sensation and perception that makes the un-tactile process of singing seem more tangible.

Moreover, a focus on breath control with adolescent male singers affords teachers and students a common vocabulary about musical concepts and vocal skills. It allows for specific conversation about a large percentage of the body's muscular/skeletal system. These conversations can begin to explore the relationship between physical movements both small (abdominal contraction) and large (swinging of arms, etc.) and their effects on vocal production. Such conversations can lead to student understandings about the connection between a conductor's gestures and the resulting singer response.

Ultimately, though, the goal is one that the teacher-conductors of young adolescent boys will not see. The goal is for these boys to be singing — perhaps in choirs — as they mature through high school, into adulthood, and into their later years. Our goal must be to provide adolescent boys with the musical confidence and vocal skills to sing whenever and wherever they

choose. Focusing on breath is a starting point in the conversation, a «doorway in» to the application of vocal technique that will endure across the years.

6. The need for research-informed pedagogy

A popular slogan among many music educators since the early twentieth century has been «Music for every child and every child for music» (Heidingsfelder, 2014). But, while classroom music and instrumental ensemble opportunities have frequently been extended to every child, there has been a noticeable problem in choral music education — a lack of boys singing in choral ensembles. There are a number of reasons for this, but common among them has been uncertainty about how to work with the adolescent changing voice. In many cases, music teachers have been concerned that they would somehow harm the adolescent voice by unintentionally instructing students to do something that caused injury. Since many music teachers don't feel confident in their knowledge of vocal pedagogy, two approaches have been most common: 1) simply tell boys that this period will pass and offer no special instruction, or 2) entirely omit boys with changing voices from adolescent choral ensembles.

Neither of these options is acceptable, especially in light of our desire to provide musical opportunities for every child. A teacher's knowledge of how a boy singer progresses from his child voice through his adolescent voice and toward his mature adult voice can provide the foundation for musical experiences that are enjoyable

from aesthetic, artistic, intellectual, and social perspectives. We want students to gain the knowledge, skill and experience that will enable them to sing in vocal and choral music activities throughout their lives. We can help ensure that these happen through the ways we adapt to the changing voices and changing needs of our adolescent boys, build toward the future musical experiences they may encounter, and challenge them to achieve success with each step of the process. Doing so will help us assure that the young musicians of today will become the adult musicians of tomorrow.

7. Choral education with adolescents in Spain

A review of recent Spanish research literature (2006-2016) reveals the existence of a main line of research (Elorriaga, 2010; Elorriaga, 2011; Elorriaga, 2011; Freer & Elorriaga 2013) that provides objective evidence of the limited role of adolescent choral education in Spain. Though there are several articles on choral singing for children and young people (Elizasu Lasa, 2005; Hurtado Llopis, 2011; Perez-Aldeguer, 2014; Sotelo, 2009), choral singing with adolescents lacks a category of its own. Traditionally, in the different regions of Spain, the main pedagogical concerns have involved the formation of youthful choirs of girls, or the integration of male adolescents within children's and/or youth choirs. Although in some countries, as in the USA (for instance) where the American Choral Directors Association has two distinct categories to clearly differentiate a mixed chorus of adolescents from a youth choir, no major

Spanish choral association has such a distinction. The lack of adolescent-specific emphasis continues in festivals and contests throughout the country. On the other hand, it is well known that the great majority of so-called «youth choirs» have a minority of their members who are adolescents aged 12 to 14. Moreover, it is unclear how choirs for these singers should be organized, whether in schools or in community-based ensembles. Spanish adolescents do not usually sing in adolescent choirs with singers of the same age and with their same vocal characteristics. Usually they have no choice but to join choirs with older or younger singers.

8. The male teen singer in the context of school music education in Spain

It is important to emphasize that the way to get adolescents to explore and develop their vocal possibilities is through the promotion of basic vocal skills during puberty. Students already sing (or croon) their favorite songs at home. School-based instruction should be about learning to sing well, developing knowledge about the voice and vocal technique, and the varied possibilities for singing throughout the lifespan. The development of these meta-cognitive skills is fundamental for choral education with adolescents.

This is a relatively easy goal to achieve if students have already received a previous choral education during their childhood, which can obviously be complemented with school instrumental practice (Ferrer Miquel, 2009). Unfortunately, in countless primary schools this is not the

case. One possible reason is that many music instructors, paradoxically, do not use their voices as models and feel insecure when teaching and rehearsing with their students. Many teachers of primary music have knowledge of the curricular aspects of what should be taught, but they lack training in the pedagogy of vocal technique (Alessandroni & Etcheverry, 2012).

This is important because male adolescents who lack previous vocal experience usually present poor vocal output, do not know how to sing down, or are reluctant to attempt singing on pitches beyond those in the range of the spoken voice. These students need to perform short, ascending, vocal exercises, starting from pitches close to the spoken voice range, that stimulate the emission of a sustained air flow, accompanied by breathing exercises that strengthen the conscious control of the abdominal musculature. In addition, sometimes these students present an extremely low and narrow range which can lead to classifying them erroneously as basses, when they simply sing low because of their lack of vocal technique. Although this provisional classification might be valid to make them participate and sing, later it will be necessary to reconsider it while they are extending their vocal range. In adolescence, in general, no categorization should be taken as definitive.

Precisely because of this circumstance, from a methodological point of view, it must be taken into account that the goals that can be achieved should be based on the awareness of each student about the positive qualities of his voice. In fact,

many of them choose to sing in a school choir precisely because they already have a positive view of their vocal instrument (Ferrer, Tesouro i Cid, & Puiggali, 2015). But for those who do not yet possess it, it is necessary to remember that this involves a process of self-learning and self-listening. In reality, it is the pupil who must correct himself, as long as he knows the reason and how to do it.

Only then we may lead students on a pathway toward singing in future stages of their lives. The work of the teacher, the choral educator, is to provide tools to make this process possible, and to manage it intelligently, taking into account the vocal needs of each student: what each young singer needs to learn in each specific moment of the process. It is very important that each boy can verify, on this basis, that some progress is made — real and, above all, measurable progress — that can be verified by comparison in relation to an earlier point in the past.

This fact is crucial in 7th and 8th grades (1st and 2nd of Compulsory Secondary Education in Spain), the time when students build a vocal identity that will be crucial for their entire lives. The perception of the voice is influenced by many factors related to self-efficacy and self-esteem. If a teenager has generalized low self-perceptions, it is very possible that he has low vocal self-perceptions, as well. If the adolescent has low self-esteem, he might have also a very distorted view of himself, which will psychologically hamper his ability to accurately evaluate his musical capabilities. It is for this reason that the implementation of a series of vocal exercises is not usually enough for

this group of students, who also require an intervention in the affective plane. These young men need specific knowledge about their developing voices so that they can come to recognize possibilities for present and future singing activity. The linking of the exercises with certain emotions, as well as the dramatization of them, will help these students in a very special way. Another interesting practice for this group of students is to listen to their own voice through the recording of a short melody. These young men will be able to use their growing vocal awareness to discover the singing opportunities open to them.

9. Didactics of choral singing for Spanish high school

The choral activities designed for adolescent group instruction should fulfill the following characteristics:

- They must have objectives specifically designed for the development of the adolescent male voice.

- They must be sequentially instructed about the different aspects of vocal technique: breathing and posture, phonation, resonance, diction and expressiveness. This is also true for the repertoire, which should progress from simple to more complex.

- They must be able to count on an adequate vocal modeling, provided by the choral educator. Boys are more attracted to singing when they can hear a quality vocal model, which does not have to be contributed by someone of the same genre, but by someone who takes into account the way they sing

and perceive their voices, more based on the sonorous presence than on the acoustic beauty (Elorriaga, 2011). In addition, this model is best accepted when it is good enough but at the same time close. The choral educators who are training singers should be able to modulate their voice, in the first instance, towards a more popular model and close to adolescents, and on the contrary, choral educators who lack vocal training should be able to acquire a minimum of vocal skills that can show them in a vocally attractive position for their students.

- Choral teachers should be able to instruct and evaluate their choir through interactive techniques that encourage the sense of community within the ensemble. This is fundamental for developing metacognitive skills in young adolescents. It is not enough for the choral educator to know what needs to be improved. Students should be aware of this as well. For this purpose, it is important to work with recordings, mental maps for each piece (delimiting the objectives and their achievement in a timeline), performing partial group castings (where some sing and others act as judges), etc.

- Repertoire must be sufficiently varied, both in form (methodology) and in content. In this sense, repertoire must meet the needs of the students, who must be able to participate in the selection of repertoire and other group singing activities. It is especially important to include choral improvisation and/or interpretation of open-ended vocal pieces where students can test

and contribute their creative ideas, as well as to make formal and interpretative decisions.

— Boys should be able to learn and perform both in single-sex grouping and in groups that include girls.

— The repertoire must be meaningful in the context of the social and personal life of the students. The lyrics of choral repertoire often tell stories of some kind. Students should be able to comment on the stories with their peers, deduce and discover the lyrics' meaning and seek relationships between the repertoire and their own lives. This will also help students sing with expressiveness appropriate to each piece.

— The repertoire should be able to encompass both the music students know (choral arrangements on modern or popular themes) as well as repertoire they do not know (choral pieces from the repertoire of common and traditional use). The first type will help students to connect choral music with «their music», while the second type will bring them the possibility of expanding their musical experience and therefore their aesthetic awareness. For this reason it is fundamental to include both types of choral music in the curriculum so that students can evolve musically. Doing so will establish bridges and connections between different styles, focusing on the content of music, rather than on its origin. In this way students will learn to value the quality of music based on its choral complexity, regardless of the musical style to which each one belongs.

Choral repertoire contains the elements of vocal curriculum, but it is the teacher's responsibility to present these elements in the right way and at the right time for their particular students. Analytical exercises or complementary information can be linked to the repertoire that students are experiencing in the choir.

Students should participate in singing activities that include a wide range of different groupings, whether in pairs, in small or large groups. It is important that the space be organized differently for each grouping. Each though incorporate some corporal activity since physical inactivity inhibits the necessary bodily functions related to singing. In addition, it is important that not all students sing at the same time, but that they have different opportunities to listen and evaluate others. Most of the time pupils accurately assess specific achievements of their peers. This leads to a clearer awareness of the pursued goal.

Lastly, it is necessary that while some activities include the whole group, not all students will always share the same objectives. In this sense it is essential to learn to work in «two directions» simultaneously. Rehearsing with a choral group does not mean that all are doing the same at all times, but all are engaged, at all times, in complementary objectives. In the same way that music is polyphonic, the instruction should also be so. Choral instruction with adolescents must be, simultaneously, multi-activity and multi-task while maintaining curricular goals and musical progress. In this sense, the planning of lessons should be consistent with this principle, allowing for boys and

girls to work both separately and together, even when in the same classroom and following the same schedule.

10. Implementation of a specific choral didactic model for adolescents in Spanish schools

Possible interventions and actions to be considered in order to improve choral practice in relation to the male voice in adolescence in schools and institutes could be the following:

1. To promote a curricular reform based on the practice of music, understanding the subject of music as a discipline, and not as a substitute of the humanities, which would imply a substantial change of the materials, using more the concept of repertory fiches and musical activities, rather than a textbook. These records should contain a variety of practical approaches to vocal technique and choral activities of the classroom («a classroom group: a choir»), and be organized from the music most known by the students, towards the most unknown, from the simplest repertoire to the most complex. Instruction should progress sequentially from the most elemental vocal skills to the most demanding. Each new element should be related to previous knowledge, and all elements should be taught through experience. This way, the students will be able to acquire a specific musical lexicon that they can understand and organize by categories. This will serve as a means to developing metacognitive skills related to their musical learning.

2. From the above, it is fundamental to promote the evaluation of the practical contents of the subject of music in both primary and secondary, facilitating the creation of vocal groupings that arise naturally from the daily vocal practice of the classroom. These groupings can be organized through extracurricular activities, or through optional subjects integrated in the curriculum (choral singing), or both.

3. To promote the creation of choirs in the faculties of education, which are necessary components in the training of teachers for working in secondary schools. In some centers of higher education in music education is already taking into account the choral formation of their students, as in the area of didactics of musical expression of the University of the Balearic Islands (Gelabert Gual, 2016). However, there are still important training gaps in this area (Chaves-Cordero & Escamilla-Fonseca, 2017).

4. To promote the creation of choirs of teachers of primary and secondary music in each region, as well as training activities in choral education for teachers of active music.

5. To define clearly the types of practice and existing choral groups, with new attention to choral education in adolescence as distinct from choral singing in youth and inter-generational choirs.

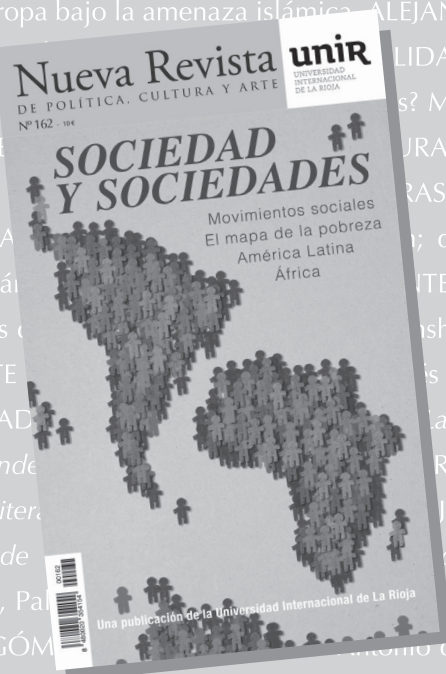
6. To promote a common research line in the teaching of choral singing in puberty and adolescence, open to the participation of different professionals and researchers.

Nº 162
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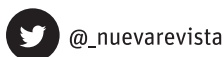
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References

- Allsup, R. E. (2003). Praxis and the possible: Thoughts on the writings of Maxine Greene and Paulo Freire. *Philosophy of Music Education Review*, 52 (2), 157-169.
- Alessandrini, N. & Etcheverry, E. (2012). Dirección coral y técnica vocal: ¿un diálogo posible? Reflexiones metodológicas para un trabajo vocal eficiente. *European Review of Artistic Studies*, 3 (2), 1-11.
- Beynon, C. & Heywood, A. (2010). Making their voices heard: A social constructivist study of youth and men who choose to sing. *Multi-Disciplinary Research in the Arts: e-Journal*, 2 (1).
- Campbell, J. C. (2016). *Attitudinal differences of choral music teachers in regards to vocal change type*. Unpublished doctoral dissertation. Kentucky University.
- Cooksey, J. (2000a). Male adolescent transforming voices: Voice classification, voice skill development, and music literature selection. In L. Thurman & G. Welch (Eds.), *Bodymind & Voice: Foundations of Voice Education* (pp. 821-841). Iowa City, IA: National Center for Voice and Speech.
- Cooksey, J. (2000b). Voice transformation in male adolescents. In L. Thurman & G. Welch, (Eds.), *Bodymind & Voice: Foundations of Voice Education* (pp. 718-738). Iowa City, IA: National Center for Voice and Speech.
- Cooksey, J. (1989). Understanding male-adolescent voice maturation: Some significant contributions by European and American researchers. In G. Paine, G. (Ed.), *Five Centuries of Choral Music: Essays in Honor of Howard Swan* (pp. 75-92). Hillsdale, NY: Pendragon Press.
- Cooper, I. & Kuersteiner, K. O. (1965). *Teaching junior high school music*. Boston, MA: Allyn and Bacon.
- Chaves-Cordero, C. F. & Escamilla-Fonseca, C. (2017). La formación académica del director coral para el desarrollo de coros infantiles. Situación actual en Costa Rica y España. *Revista Electrónica de Educare*, 21 (1), 1-23.
- Demorest, S. M. & Clements, A. (2007). Factors influencing the pitch-matching of junior high boys. *Journal of Research in Music Education*, 55 (3), 190-203.
- Elorriaga, A. (2010). El coro de adolescentes en un instituto de educación secundaria: un estudio de fonación. *Revista Electrónica Complutense de Investigación en Educación Musical* 7, (1), 1-20.
- Elorriaga, A. (2011). La construcción de la identidad masculina en la adolescencia a través del canto coral. In J. H. Llopis (Ed.), *Contextos Corales*. Valencia: Germania.
- Elorriaga, A. (2011). La didáctica del canto colectivo en la adolescencia: Un estudio de intervención en un IES. *Lista Electrónica Europea de Música en la Educación*, 28, 37-77.
- Elizasu Lasa, I. (2005). Situación actual del mundo coral infantil en el País Vasco. *Musiker, Cuadernos de Música*, 14, 35-46.
- Hurtado Llopis, J. (2011). Hacer música para el desarrollo personal y social. *Eufonía: Didáctica de la Música*, 51, 24-33.
- Ferrer, M. (2009). El canto coral y las orquestas infantiles, una educación en valores. *Eufonía: Didáctica de la Música*, 45, 30-38.
- Ferrer, R., Tesouro i Cid, M., & Puiggali, J. (2015). Las principales motivaciones para cantar en un coro infantil o juvenil según la opinión de algunos directores. *Eufonía: Didáctica de la Música*, 64, 66-72.
- Fisher, R. A. (2014). The impacts of the voice change, grade level, and experience on the singing self-efficacy of emerging adolescent males. *Journal of Research in Music Education*, 62 (3), 277-290.
- Freer, P. K. (2016). The changing voices of male choristers: An enigma ... to them. *Music Education Research*, 18 (1), 74-90.

- Freer, P. K. (2015). Perspectives of European boys about their voice change and school choral singing: Developing the possible selves of adolescent male singers. *British Journal of Music Education*, 32 (1), 87-106.
- Freer, P. K. & Elorriaga, A. (2013). La muda de la voz en los varones adolescentes: Implicaciones para el canto y la música coral escolar. *Revista Internacional de Educación Musical*, 1 (1), 14-21
- Freer, P. K. & Tan, L. (2014). The self-perceptions of young men as choral singers in Singaporean secondary schools. *Research Studies in Music Education*, 36 (2), 165-178.
- Freer, P. K. (2012). The successful transition and retention of boys from middle school to high school choral music. *Choral Journal*, 52 (10), 8-17.
- Freer, P. K. (2011). Weight lifting, singing, and adolescent boys. *Choral Journal*, 51(4), 32-41.
- Freer, P. K. (2008). Boys' changing voices in the first century of MENC journals. *Music Educators Journal*, 95 (1), 41-47.
- Fuchs, M., Meuret, S., Theil, S., Täschner, R., Dietz, A., & Gelbrich, G. (2009). Influence of singing activity, age, and sex on voice performance parameters, on subjects' perception and use of their voice in childhood and adolescence. *Journal of Voice*, 23 (2), 182-189.
- Gebhardt, R. M. (2016). *The adolescent singing voice in the 21st Century: Vocal health and pedagogy promoting vocal health*. Unpublished doctoral dissertation. Ohio Central State University.
- Gelabert Gual, L. (2016). Música Viva: un proyecto integral a partir del canto colectivo. *Dedica. Revista de Educação e Humanidades*, 9, 247-261
- Graf, G. G. (2016). *Shared insights: A survey of postsecondary and adult men's chorus directors*. Unpublished doctoral dissertation. Maryland University.
- Heidingsfelder, L. (2014). The slogan of the century: «Music for every child; Every child for music». *Music Educators Journal*, 100 (4), 47-51.
- Hendley, J. A. & Persellin, D. C. (1996). How the lower adult male voice and the male falsetto voice affect children's vocal accuracy. *Update: Applications of Research in Music Education*, 14 (2), 9-14.
- Hirschorn, D. N. (2011). *Vocal improvisation and the development of musical self-efficacy in adolescent choral musicians*. Unpublished doctoral dissertation. Georgia State University.
- Hollien, H. (2012). On pubescent voice change in males. *Journal of Voice*, 26 (2), 29-40.
- Kothandaraman, S. & Thiagarajan, B. (2014). Mutational falsetto: A panoramic consideration. *Otolaryngology Online Journal*, 4 (1).
- Mckenzie, D. (1956). *Training the boy's changing voice*. New Brunswick, NJ: Rutgers. University Press.
- Nguyen, A. T. (2015). *How vocal classification affects young singers*. Unpublished doctoral dissertation. Portland University.
- Perez-Aldeguer, S. (2014). El canto coral, una mirada desde la educación musical. *Revista de Estudios Pedagógicos*, 15 (1), 389-404.
- Simpson, T. (2013). *Vocal technique and repertoire choice for middle school students*. Unpublished doctoral dissertation. Liberty University, USA.
- Sotelo, C. (2009). Les trobades de corals a secundària a Catalunya. *Guix: Elements d'acció educativa*, 360, 26-27.
- Stephens, E. G. (2012). *Formation and prediction of the singing perceptions of self-labeled singers and non-singers*. Unpublished doctoral dissertation. Miami University.
- Swanson, F. J. (1977). *The male changing voice ages eight to eighteen*. Cedar Rapids, IA: Laurance Press.

- Thurman, L. (2012). Boys' changing voices: What do we know now? *Choral Journal*, 52 (9), 8-21.
- Warzecha, M. (2013). Boys' perceptions of singing: A review of the literature. *Update: Applications of Research in Music Education*, 32 (1), 43-51.
- Wicks-Rudolph, M. (2013). *Choral directors' knowledge of biological and sociological sex differences in the secondary choral classroom*. Unpublished doctoral dissertation. Auburn University, USA.
- Wiggins, J. (2003). *Teaching for musical understanding*. New York, NY: McGraw Hill.
- Willis, E. C. & Kenny, D. T. (2008). Relationship between weight, speaking fundamental frequency, and the appearance of phonational gaps in the adolescent male changing voice. *Journal of Voice*, 22 (4), 451-471.
- Willow-Peterson, K. (2016). *Identity development among adolescent males enrolled in a middle school general music program*. Unpublished doctoral dissertation. Boston University.

Table of Contents

Sumario

Music education

Educación musical

Guest editor: Ángela Morales
Editora invitada: Ángela Morales

Ángela Morales

Presentation: Music education, looking
from the past to the future
*Presentación: La educación musical, una
mirada del pasado al futuro*

Ángela Morales, Enrique Ortega, Elena Conesa and Cecilia Ruiz-Esteban

Bibliometric analysis of scientific
output in music education in Spain
*Análisis bibliométrico de la producción científica
en Educación Musical en España*

Roberto Cremades-Andreu and Desirée García-Gil

Musical training for Primary Education graduates
in the context of Madrid
*Formación musical de los graduados de Maestro en
Educación Primaria en el contexto madrileño*

Jesús Manuel de Sancha Navarro

Music in Secondary: interest for the contents, according
to the students and the teachers of 4° of ESO
*Música en Secundaria: interés por los contenidos, según el
alumnado y el profesorado de 4° de ESO*

433

Tatiana García-Vélez and Antonio Maldonado Rico

Reflections on musical intelligence
Reflexiones en torno a la inteligencia musical

451

389 Patrick Freer and Alfonso Elorriaga Llor

Toward a pedagogy informed by research about
the boy's changing voice
*El desarrollo de la voz masculina durante la adolescencia: una
pedagogía basada en la investigación*

463

399 Miguel Román Álvarez

Technology at the service of music education
Tecnología al servicio de la educación musical

481

Susana Toboso Ontoria, Inmaculada Tello Díaz-Maroto y Francisco José Álvarez García

University musical training in a blended-learning context
*Formación musical universitaria en un
contexto de enseñanza blended-learning*

497

Studies

Estudios

Sara González Gómez, Bernat Sureda García and Francisca Comas Rubí

The educational renovation of the Barcelona City Council and its photographic diffusion (1908-1936)

La renovación escolar del Ayuntamiento de Barcelona y su difusión fotográfica (1908-1936)

519

Vicente Llorent-Bedmar, Verónica Cobano-Delgado and María Navarro-Granados

School leadership and school management in underprivileged areas

Liderazgo pedagógico y dirección escolar en contextos desfavorecidos

541

2. Book reviews

Ibáñez-Martín, J. A., & Fuentes, J. L. (Coords.)

Educación y capacidades: hacia un nuevo enfoque del desarrollo humano [Education and capabilities: Towards a new focus on human-development] (Cruz Pérez). **Kristjánsson, K.** *Aristotelian Character Education* (Juan Luis Fuentes). **Barraca Mairal, J.** *Originalidad e Identidad Personal. Claves antropológicas frente a la masificación [Originality and personal identity: Anthropological keys in the face of overcrowding]* (Aquilino Polaino-Lorente).

Renzulli, J. S., & Reis, S. M. *Enriqueciendo el currículo para todo el alumnado [Enriching the curriculum for all students]* (Patricia Olmedo Ariza). **Prats, E.** *Teorizando en Educación: entre erudición, poesía y opinionitis [Theorising in education: Between erudition, poetry, and opinionitis]* (David Reyero). **Segura Peraita, C. (Ed.)** *El método socrático hoy. Para una enseñanza y práctica dialógica de la filosofía [The Socratic method today: For dialogical teaching and practice of philosophy]* (Ernesto Baltar).

571

Table of contents of year LXXV

Índice del año LXXV

603

This is the English version of the research articles and book reviews published originally in the Spanish printed version of issue 268 of the **revista española de pedagogía**. The full Spanish version of this issue can also be found on the journal's website <http://revistadepedagogia.org>.



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