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Singing BAPNE®: body percussion and voice as a didactic element

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Abstract

The use of the voice and singing in the field of body percussion is one of the less studied aspects from a pedagogical point of view. This publication structures the pedagogical foundation of how to use the voice with the body percussion, according to an ethnomusicological base, in order to lay the foundation at an educational level. Through the Bapne Method we encourage the development of multiple intelligences with a precise foundation that leads to cognitive, social-emotional and psychomotor stimulation. As a result, "Singing Bapne" was born as a specific form of vocal and kinesthetic learning, structured into four levels of difficulty based on various rhythmical and melodical voices. This way of working comes from the body movement to which we add melodic parts, rich in onomatopoeic elements and scats.

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Keywords: Body percussion, BAPNE, voice, singing, movement, music education

1. Introduction

Consequences of the body movement and its relation with the use of the voice in pedagogical functions, have an important involvement in learning processes, cognitive stimulation, psychomotor, socio-emotional skills, referring to anthropological and ethnic-musicological level.

In our culture, the most important teaching methods in musical education (Orff, Kodaly, Dalcroze, Gordon, Willems...), use specific activities in learning melodies, as well as rhythms, instruments and body movement.

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In trying to develop the singing of a melody, body percussion patterns always has a secondary function in learning tasks, as the voice is the structural part, and body percussion have almost exclusively a role of rhythmic embellishment or choreography.

The BAPNE Method® does not contemplate a specific learning activity connected to melody (Cozzuti, 2014), even if in contemporary music, the research shows the importance of body percussion in choral education (Emer, 2014). The connection between voice and body percussion is contemplated in Voice BAPNE® research, in which the activity from the action of singing takes place, in order to implement subsequently body percussion patterns (Quarello, Singing BAPNE® activity was born as a specific form of kinesthetic-vocal learning, where every exercise starts with the movement of the body, to which we add a vocal melodic part.

The author has been a teacher in professional singing since 2000, and an official trainer of the BAPNE Method® since 2013.

Starting from the idea that the voice is actually a movement of the body with a very specific and identifiable sound, just like the beating of the hands or feet, Singing BAPNE® activity aims to consider voice and melody as integral and not prevaricating elements as far as the movement of the body as a whole is concerned; given the lack of studies about it, we consider it necessary to investigate the management of the voice from neurological, psychological, medical, otolaryngology (phoniatrics) point of view, in relation to this particular application in:

- musical education
- cognitive stimulation
- socio-emotional field
- kinestethic coordination
- integration in music or professional singing studies
-

2. Method

2.1. Method and reference models

Singing BAPNE® uses some teaching theories implemented in BAPNE Method® (Romero, 2012b), with particular reference to the management and the use of the feet plan. In order to learn and maintain the rhythmic structure, we use standard figures (e.g. “a square” in a structure of 4/4, the “U” in a structure of 5/4) with which the students always clearly have the first, the last and the intermediate beats of the musical measures proposed.

According with the BAPNE® Method, the students should stand in a circle, possibly with the alternation of men and women. It is possible to divide the group into rhythmic-vocal section (up to a maximum of 4), like a traditional choir.

The learning plan uses structures of the VAK model, in the form of imitation, always with sequential teaching processes (Gregorc’s model).

In agreement with Kodaly’s method, the development of the melody in the exercises follows pentatonic scales, and then evolves to modal level; concerning Scat singing form, the prosodic part is taken by the phonemes theorized by Bob Stoloff; referring to onomatopoeic singing form, the activity is created by the authors, influenced by sounds, phonemes, musical styles from various cultures of the world.

The form of writing musical notation follows the classic western one, exclusively in violin key, with the percussive element written above the note in the score; below the note we can read the phoneme to sing (see Fig.1).

All the activities of the Singing BAPNE® are structured and planned without choreographic or artistic aim, purely educational, for as many as 30/35 people in a group. Use of microphones, instruments or music accompaniments is not allowed.

2.2. Singing BAPNE®

Singing BAPNE® activity is divided into 4 progressive skill levels, each one containing 20 exercises (see Table 1). Our expectation is the creation of other 4 levels for the development of the ability in the future. The level is

measured concerning rhythmic and mnemonic skills, singing abilities in pitch combination, motor-speech coordination of the students.

The group is standing in a circle, with male and female alternation (when is possibile); kinesthetic-audio-visual stimuli are given by a leader, the conductor, which is at the center of the circle. The conductor manages the group according to the abilities and the level of skill achieved: at first he gives "pattern loops" with the structure of body percussion, then the vocals.

The conductor may decide to work collectively, or he can divide the group into sections. Those divisions are not to be intended in accordance with the pattern of traditional choir (soprano, alto, tenor, bass): the orchestration of the melodies provides the possibility for everyone to sing any exercise, always having a comfortable vocal range, that never exceeds 1 octave. For this reason, male and female share every sections, called "voices" (see 2.3).

Table 1. Levels and parameters of evaluation

Level	Rhythmic Values	Body Percussion & Melody	Beat	Group sections learning form	Melodic structures	Exercise measures
1	Half note Quarter note Eight note Sixteen note On the beat Off the beat	Synchrony	4/4, 3/4	4 sections max Sequential Canon	Pentatonic maj scales Major scales Key changing	2 max
2	Half note Quarter note Eight note Sixteen note On the beat Off the beat Triplets Legato	Synchrony Asynchrony	4/4, 3/4	4 sections max Sequential Canon	Pentatonic major scales Major scales Minor scales Key changing	2 max
3	Half note Quarter note Eight note Sixteen note On the beat Off the beat Triplets Legato Syncopated	Synchrony Asynchrony	4/4, 3/4 5/4	4 section max Polymeters Sequential Canon	Pentatonic major and minor scales Major scales Minor scales Key changing Modal scales	4 max

4	Half note Quarter note Eight note Sixteen note On the beat Off the beat Triplets Legato Syncopated	Synchrony Asynchrony	4/4, 3/4 5/4 hands and feet have different beat	4 section max Polymeters Sequential Canon	Pentatonic major, minor and blues scales Major scales Minor scales Key changing Modal scales	4 max

To each rhythmic figure is assigned a specific body percussion element: for a quarter note, a clapping (front or back); for an eighth note, a chest slap or snap with the alternation of the hands; for sixteenth notes, thights of back slaps with the alternation of the hands.

With the use of those particular body percussion figures, we aim to have biomechanics stimulations, concerning to:

- transversal plane (chest / thights / feet)
- sagittal plane (left / right)
- coronal plane (front / back)

2.3. An example of exercise and practical conduction

All the "voices" in the exercises are independent from the structure of the others (see Fig. 1a). The conductor may choose to use just one or all the "voices", depends of the ability of the group. In 4/4 structure, the conductor suggests the group to move on site, with steps that form a "square" on the floor (see Fig. 1b).

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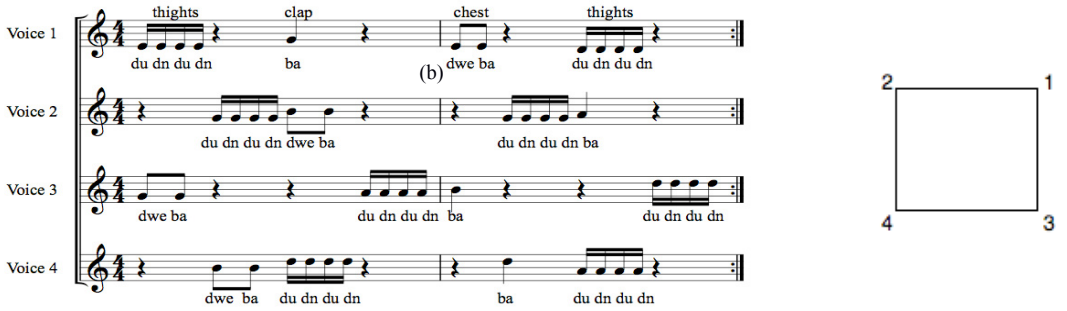

Fig 1. (a) Example of exercise; (b) "The Square"

The student moves his right foot forward on the "point 1", and the left on the "point 2"; then the right back on the "point 3", and the left on the "point 4". And so on, in a loop form.

The use of "the square" has some reason: at first, the group moves in synchrony; moreover, the identification of the beat and the accents of musical measures is clearer for every student.

Subsequently the conductor can divide the group into four sections, "to teach patterns": first of all, he must teach body percussion patterns to each section; then the conductor assigns melodic patterns; at first vocal parts can be assigned simply by rhythmical speaking, and then with the melody.

The orchestration is ready. When the group is moving and singing with a good fluency and no anxiety, the activity can be managed with various additional actions by the conductor:

- asking to stop melody or rhythmical action, and to reprise to his signal;
- asking to walk freely in free space in the classroom;
- asking changes in dynamics, in speed; he can improvise over the rhythmic-melodic orchestration created too;
- asking to create micro-groups of 1-2 people per section, and create an orchestral canon.

Every exercises can be used again in other sessions, simply giving different "voices" to the sections.

2.4. The role of the conductor: skills

To conduct an activity of Singing BAPNE®, specific musical skills are required in body percussion and voice, with a level that allows the conductor to lead every exercise listed.

Therefore is recommended a specific training in this regard, to optimize motor coordination skills. Furthermore, we suggest an high level of attention, charisma and communication abilities to properly manage the activities of the group.

3. Results

3.1. Working group and tests

Every results of the activity derived from an analysis of the practical work done in the class, according to the following variables:

- number of working hours
- the level of musical ability and motor coordination of the class before the activity
- the age and the motivation of the working group
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Notably the fact that there is any validation in music tests used both to young and adult students, the activity was carried out and monitored on a choir already known by the author. This group has a level of musicianship rather homogeneous, and an average age of 30 years. Each singer has undergone an individual musical test and interview.

Within this group there were choral conductors, speech therapists, music teachers in elementary and middle class, and educators in kindergartens and early childhood. Those specialists reported some exercises of the Singing BAPNE® within their educational standard programs.

Some exercises taken from the activity has been included in the author professional singing classes, especially in case of singers with a deficit level in rhythmic skills.

At last, we have considered parameters of objective assessment in terms of musical skills and work-related group.

3.2. Results

The training with Singing BAPNE® activities, during short and long periods, denotes an objective improvement in different parameters, as we seen in Table 2.

Table 2. Results, short and long period improvement

Short period (12 hours, 1 weekend workshop)	Long period (3 months, 2 hours weekly)
To connect rhythmic and prosodic accent	To recognize the exact positioning of the prosodic accent inside the beat of the rhythmic structure
To divide rhythmic and prosodic accent	Great improvement in kinesthetic-vocal coordination skill
Synergy between rhythmic pulse, breathing rate and voice emission	Rhythmical music reading skill of the figures found in the exercises
To use dynamics and speed variation in relation to body percussion and prosodic accents	Ability to follow the right beat in music performance
Habit of listening the conductor	Discrimination between accents on the beat and off the beat
Improvement of attention	Singing and clapping variation of 3/4, 4/4, 5/4 musical loops.
Kinesthetic-vocal coordination skills	All the skills of the short period are consolidated and maintained
Harmony of the group	Recognition of pitch and time

As described in 3.1, the training in young class, from 9 to 14 years old, shows similar improvement like adult class. Moreover, we report increased interest and enjoyment in music classes, and a positive stimulus in students who harbor a lack of confidence in their voice. The activity, as conceived today, is rather too complex to be addressed at a younger than 9 years.

The activity of individual students with rhythmic deficits in music performances, has a more than positive effect in the long period. Those students seems to increase in the level of understanding of the rhythmic pulse and autonomous management feelings, to “clap and sing” on the beat and off the beat.

4. Discussion and conclusions

4.1. Singing BAPNE®: anthropological and musical considerations

When a body is moving for a mechanical action, repeated for several hours each day, for example miners or cotton pickers, it’s common the invention of a melody of a song, strictly connected to the activity of the body, for systematize movements and relieve the workload. This is concerned to an anthropological level.

Singing BAPNE® activity is related at the same principle: every exercise starts with body percussion patterns, and then the conductor adds the melodic element. The rhythmic structure with “feet references”, with the construction of the square and of " U ", as seen in 2.1, could be developed with the structure of the triangle (3/4 or base /8) typical of African culture.

"Polyphonic" results are built on "polyrhythmic" structures, clear and defined for each user: musical criteria of “on the beat” and “off the beat”, and the confidence with musical measures are self-determined by the basic structure reference. In level 3 and 4 of the activity, this confidence happens even when we expected to work asynchronously between movement and voice. We propose further research to explore possible connections between the activity and the perception of time and rhythm.

In the construction of prosodic pattern, the use of precise rhythmic figures is very important, to match different rhythmic values corresponded to the presence of phonemes that evoke strong (p-,k-,d-) or weak (r-,ng-,m-) accents.

4.2. Singing BAPNE®: didactical discussion

Students learn very quickly, because the body never interrupts the movement, even if the “voice” changes in the structure. Stimuli vowels are always different in relation to the anthropological activity. The transition from pentatonic melodies onomatopoeic to modal scales with “scat” prosody is also gradual and progressive. The parameter of the pitch is always secondary: first of all students have to learn rhythmic pattern.

Singing BAPNE® activity aims to emphasize this priority: it is believed that the biggest problem for those who want to sing is to be in tune with the right pitch. We consider rhythm in priority.

We have the evidence that, after a long period of the activities, we found an improvement in voice quality, and in the recognition of the pitch too. May this could be considered as a result of an improvement of coordination in breathing and voice emission: this coordination requires a synergistic balance between the ear, the whole body and the use of the voice. For those reason, it would be worthwhile to deepen the value of the Singing BAPNE® activity in relation to:

- fluidity in coordination of the breathing action (to inhale and to exhale), when a change of rhythm is required
- laryngeal muscular strains, exerted to accomplish a given melody, with repeated body movements patterns
- relations between prosodic accent and laryngeal muscular strains, in presence of body percussion patterns
- hyper concentration on melodies and pitches (typical attitude of many singers), with complex rhythmic figures
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  - We could have involvement of Singing BAPNE® activity in:
  -
- the teaching of rhythm in music classes
- improvement of body movement coordination of singers playing musical instruments
- the research of a good balance feelings in breathing and vocal techniques

We propose further investigations in phoniatric research, especially in the study of artistic voice, and music education. In any case, Singing BAPNE®'s aim is education and cognitive stimulation, never directly connected to musical artistic performances.

4.3. Considerations about control group and conclusions

In music field, the improvement of skills should be always compared with a pre-test. There aren't music test with a scientific validation used with young and adult students. Moreover, we can't suppose to find in class students who have exactly the same skill in psycho-motor coordination, musical knowledge, rhythmic or vocal tasks, to obtain a “model” to refer.

For this reason, the control group was selected from people already known by the authors.

We propose further investigations in specific music classes, with pre/post tests, to understand the influence with Singing BAPNE® activity in the following parameters:

- executive functions
- concentration
- kinesthetic coordination
- attention
- musical intelligence
- interpersonal intelligence

It is worthwhile, therefore, to consider the value of Singing BAPNE® about a global level: it is an activity that seeks to "mix" the value of the class, without bringing out the potential of the individual, but the average value of the group. The proposal by the conductor of the skill level for each exercise must inevitably take into account this factor. There is no direct individual judgement about coordination and musical skills during the activity.

A particular detail is that students, at the end of the activity, have not the tendency to regard it like a "vocal lesson", but like a “rhythm lesson”, although there is a strong involvement of the use of the voice.

References

Cozzutti, G., Blessano, E., Romero-Naranjo, F. J. (2014). *Music, Rhythm and movement: A comparative study between the BAPNE and Willems Methods.* Procedia - Social and Behavioral Sciences, Volume 152, 7 October 2014, Pages 1128-18.

Emer, V., Romero-Naranjo, F. J. (2014). *The Use of Body Percussion in Contemporary Choral Music.* Procedia - Social and Behavioral Sciences, Volume 152, 7 October 2014, Pages 53-57.

Kodaly, Z (1995). *Musica Pentatonica, unisono, 4 voll. (100 Canti ungheresi, 100 Piccole marce, 100 Melodie dei Chermessi, 140 Melodie ciuvascie).* Carisch.

Prince, Thompson & Schmuckler (2009). *Pitch and Time, Tonality and Meter: How Do Musical Dimensions Combine?*. Journal of Experimental Psychology: Human Perception and Performance 2009, Vol. 35, No. 5, 1598–1617.

Quarello, A., Pezzuto, E., Romero Naranjo, F.J., Liendo Cárdenas, A. (2014). *Voice and movement in circle with body percussion. Facilitation in learning observed in voice BAPNE® method and in circlesongs teaching.*XII Jornadas de Redes de Investigación en Docencia Universitaria Universidad de Alicante.

Quarello, A., Pezzuto, E., Romero-Naranjo, F. J. (2014) *Analytical Path on Voice BAPNE® Method Handling Attention Levels Using a Voice-music-movement Association.* Procedia - Social and Behavioral Sciences, Volume 152, 7 October 2014, Pages 2-6

Romero-Naranjo, F. J. (2011a). *BAPNE: Body percussion, Theoretical practical foundation. Vol 1.* Barcelona: Body music – Body percussion Press.

Romero-Naranjo, F. J. (2011b). *BAPNE: Body percussion, Theoretical practical foundation. Vol 2.* Barcelona: Body music – Body percussion Press.

Romero-Naranjo, F. J. *(2011c). BAPNE: Body percussion, Theoretical practical foundation. Vol. 3.* Barcelona: Body music – Body percussion Press.

Romero-Naranjo, F. J. *(2011d). BAPNE Method: Foundation Pack 1. 8 DVD-Rom.* Barcelona: Body music – Body percussion Press.

Romero-Naranjo, F. J. (2011e). *BAPNE Method: Foundation Pack 2. 8 DVD-Rom*. Barcelona: Body music – Body percussion Press.

Romero-Naranjo, F. J. (2012b). *Basic music rhythms with body percussion. DVD-Rom*. Barcelona: Body music – Body percussion Press.

Stoloff, B. (1996). *Scat! Improvisation Techniques.* Gerard & Sarzin Publishing Co.