



***Pedagogías activas
y recreativas***
La educación en el siglo XXI



Marco Antonio de la Ossa



• 44 •

Jornadas y Congresos

**Pedagogías activas y recreativas:
la Educación Musical en el siglo XXI**

Pedagogías activas y recreativas: la Educación Musical en el siglo XXI

Marco Antonio de la Ossa-Martínez (*ed.*)



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Neuromotricity for musicians. The “bola cantabile” as a didactic resource in singing and corporal expressions for the bapne method

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ABSTRACT

The purpose of this chapter is to propose activities based on neuromotricity, where musical language is unified with the work of body expression, first we make a clear difference in the terms of motor, psychomotricity and neuromotricity and then give way to the explanation of the activity called “Bola Cantabile”. With this type of activities, we propose a high volume of practical resources within the Bapne method.

Keywords: Neuromotricity; BAPNE; Dual Task; Handball change; Bola Cantabile.

NEUROMOTRICIDAD PARA MÚSICOS.

LA “BOLA CANTABILE” COMO RECURSO DIDÁCTICO EN CANTO Y EXPRESIÓN CORPORAL DEL MÉTODO BAPNE

RESUMEN

El propósito de este capítulo es proponer actividades basadas en la neuromotricidad, donde se unifique el lenguaje musical con el trabajo de expresión corporal, primero hacemos una clara diferenciación en los términos de motricidad, psicomotricidad y neuromotricidad para luego dar paso a la explicación de la actividad denominada “Bola Cantabile”. Con este tipo de actividades, proponemos un alto volumen de recursos prácticos dentro del método Bapne.

Palabras clave: neuromotricidad; BAPNE; tarea dual; cambio de manos; bola cantabile.

INTRODUCTION

Neuromotricity is a discipline that can be applied in different educational fields such as theater (Asurmendi-Telleria & Romero-Naranjo, 2022), physical activity and sport sciences (Romero-Naranjo, 2019, 2020, 2021, 2022; Romero-Naranjo et al., 2023), a foreign language (Fernandez et al., 2021), ethnography (Di Russo & Romero-Naranjo, 2021; Romero-Naranjo, 2008), mathematics (Romero-Naranjo et al., 2022) or in the field of music (Romero-Naranjo, 2020). Regarding the advances in recent years on the brain from neuropsychology and neuroscience, executive functions have played a very important role due to the high rate of publications in the educational field (Andreu-Cabrera & Romero-Naranjo, 2021; Romero-Naranjo & Andreu-Cabrera, 2023).

In the case of dual tasks, the increase in scientific publications has been exponential in the last 10 years due to the high interest and positive results mainly in neurorehabilitation. Even so, the practice of the double task can be taken to the educational field in a systematized way as the BAPNE method does. Physical activity has numerous physical and cognitive benefits, as demonstrated by numerous authors. (Aedo-Muñoz et al., 2021; Aguilar-Herrero et al., 2021; Burbano-Pantoja et al., 2021; Cárdenas-Sánchez et al., 2015; Falbo et al., 2016; Fritz et al., 2015; Koch et al., 2018; Kokubo et al., 2018; Kulinna et al., 2018; Mendel et al., 2015).

The body percussion is a discipline that has a great effectiveness in the educational field so it can be used in several areas (Romero-Naranjo, 2019, 2020, 2021, 2022), such as visual arts (Alonso-Sanz & Romero-Naranjo, 2013), music (Romero-Naranjo, 2019, 2020, 2020, 2021, 2022), theater (Asurmendi-Telleria & Romero-Naranjo, 2022), learning a foreign language (Fernández et al., 2021), ethnography (Di Russo & Romero-Naranjo, 2021; Romero-Naranjo, 2008), etc. In the sciences of physical activity, the BAPNE method provides a whole protocol of practical activities divided into two main lines. One of them in body expression with its corresponding manuals (Romero-Naranjo, 2019), and secondly, the subject that interests us here, protocols linked to physical activity called BAPNE FIT. In this area we can study cardiorespiratory aspects and ergospirometry or stress test with gas analysis (Romero-Naranjo & González de Benatuil, 2022).

DIFFERENCES BETWEEN MOTOR SKILLS, PSYCHOMOTOR SKILLS AND NEUROMOTRICITY

From a theoretical and practical point of view, there are clear differences between each of these concepts, so we will now proceed to define them.

- **Motricity**: is the ability to control body movements in a voluntary and coordinated manner involving the motor system. Activities such as walking, jumping, running, rolling, crawling, going up or down stairs, etc. clearly represent motor skills.
- **Psychomotricity**: according to the Spanish association of psychomotricity, psychomotricity is the set “of cognitive, emotional, symbolic and sensory-motor interactions in the capacity of being and expressing oneself in a psychosocial context”. Activities such as following a path, tying shoelaces, putting an object inside another object according to its geometric shape, making a circuit with specific goals, etc.
- **Neuromotricity**: is the educational and neurorehabilitative procedure that affects cognitive stimulation through the executive functions in which the double task and mainly the voice, provides a superior function to the stimulation. The example of language as a task independent of the upper and lower extremity is the main element that differentiates it from motor and psychomotor skills.

There are several definitions of neuromotricity, but Romero-Naranjo is the first author to link it to executive functions through his educational proposals with the BAPNE method. The hierarchy that we propose stems from motor skills as the most basic movement to neuromotricity as a higher activity (Figure 1).

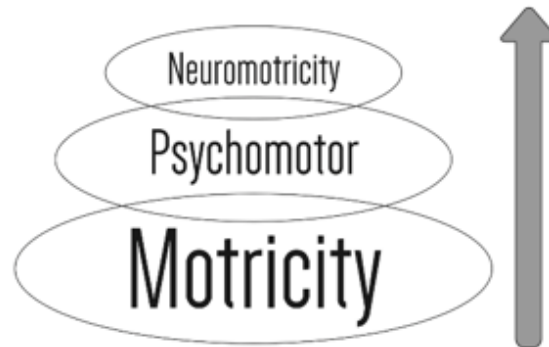


Figure 1. Neuromotricity Structure

a. What is not Neuromotricity?

- It is not neuromotricity to do any motor activity and talk about the brain. Neuromotricity has a very unique activity protocol.
- It is not neuromotricity to make a motor circuit and talk about the brain.
- It is not neuromotricity to do body percussion listening to a musical base.
- It is not neuromotricity to play hand clapping games.

b. The dual task as a pedagogical resource

Neuropsychology has structured three classic paradigms in relation to the so-called “dual task” (Baddeley, 1986; Falbo et al., 2016; Fritz et al., 2015; Koch et al., 2018; Mendel et al., 2015; O’Shea et al., 2022; Ruthruff et al., 2001):

1. Motor/Motor
2. Cognitive/Cognitive
3. Cognitive/Motor

Later other researchers proposed another model (Park et al., 2014; Kim et al, 2017) called:

4. Rhythmic/Motor

The BANE method proposes another possible paradigm due to the type of activities executed named:

5. Rhythmic/Motor/Cognitive (Romero-Naranjo et al, 2023a).

The activity protocol of the BAPNE program is based on activities in which the subject must perform motor movement activities while performing rhythmic structures with the upper limb and from the verbal point of view performs cognitive activities that the teacher can indicate (addition, subtraction, capitals of countries, saying opposites, translating words,

singing a melody, etc.). BAPNE's method has a "Chart" summarizing all the variants that can be performed (Figure 2).

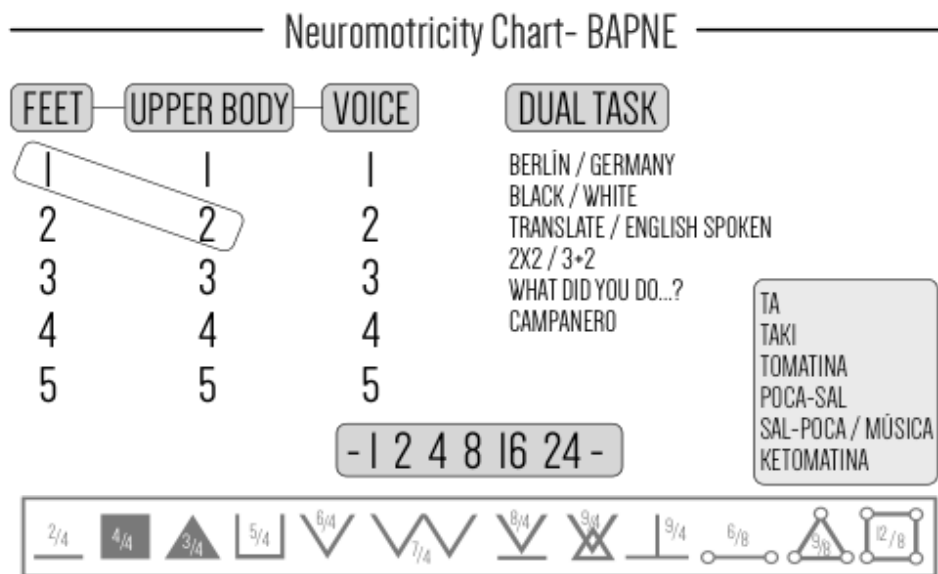


Figure 2. Neuromotricity Chart-Bapne Method

This aspect has already been discussed more extensively in our research entitled "Pilot Study of the Assessment of Anxiety and Attention through Body Percussion and Neuromotricity in Secondary Education Students in Physical Education, Music and Visual Arts Classes" (Romero et al., 2022).

c. Handsball change and "Bola Cantabile"

With regard to the musical field, there are many activities that can be executed where the BAPNE method provides resources not only for children, but also for the sciences of physical activity and sport, theater and music. Regarding the learning of musical language, the program called cognitive solfeggio provides practical resources for the basics of musical language from another perspective (Romero-Naranjo, 2020).

Within this program linked to acquiring competence through musical concepts, an activity called "Handsball Change" (Figure 3) stands out, which consists of micro-activities that require a high level of attention, among which the Bola Cantabile stands out (Romero-Naranjo et al., 2022).



Figure 3. Bola Cantabile

d. Development

The execution of this activity is centered on the use of a balloon of 36 cm in diameter inflated with air and with some weight that must be hit by the participants (Figure 3). The objective of this proposal is not only to enhance tuning and the use of the canon but also body expression and movement. The body expression activities proposed here are divided into four main blocks:

- Gestures.
- Posture.
- Look.
- Facial expression.

e. Proposed activities

The proposal of activities can be immense, although here we propose the main ones that can be constantly modified and expanded. Here are some examples:

- The group is walking and moving in space while singing the diatonic scale each time the ball is hit.
- An upper third is sung each time the ball is hit until the high D is reached.
- The diatonic scale is sung in 4-voice canon.
- The blues scale is sung ascending and descending.
- The addition of 3 between each time the Ball is struck until the number 100 is exceeded.
- Multiplications are performed always doubling the previous number.
- Each person performs a gesture each time the ball is hit, which must then be repeated by the next person. Every two people must change the gesture.
- The group adopts a gesture associated with each musical note with a maximum of 8 gestures.
- Hit it with a part of the body other than the hand (head, shoulder, foot...).
- Adopt a specific posture each time you strike a note.
- Adopt a specific facial expression or look each time you strike.



Figure 4. Students from the University of Alicante performing the “Bola Cantabile” activity

CONCLUSIONS

With this type of activity, by way of conclusion, we would like to emphasize that we can be working in a parallel way both musical aspects and corporal expression. First of all, we have made a terminological difference between the concepts of motor, psychomotricity and neuromotricity to finally link it to the activity of the Cantabile ball within the cognitive solfeggio program. The dual task has a fundamental aspect in the BAPNE method since we possibly work the motor-cognitive-rhythmic paradigm that, from the point of view of cognitive stimulation, can be worked from different areas.

Corporal expression is one of the most common deficiencies in the training of musicians, which is why here we provide a suggestive activity that allows us to provide resources that do not tie the music apprentice to a chair, nor does it have a hierarchical learning structure. For this, motivation and above all collaborative learning play a very relevant role in Bapne's method.

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