

MULTIPLE INTELLIGENCES AND MUSIC CLASSES - AN INNOVATIVE APPROACH

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ABSTRACT

As music teachers in mainstream schools, we approach teaching strategies, activities, work tasks and games in our lessons, more or less intentionally, for pupils who have and demonstrate musical abilities, as about the rest of them, considered as not having a musical ear, either neglecting them or assigning them other compensatory work tasks, in the best situation. Because they require not only creativity, willingness and a good knowledge of pupils' abilities, inclinations and capabilities, but also a considerable effort in the didactic design of the process of transmitting and assimilating knowledge, differentiated activities are used particularly when there are pupils with Special Educational Needs included in the classroom.

According to Gardner's Theory of Multiple Intelligences, each human being possesses and demonstrates in practice different types of intelligence, with the specification that some of them may be more developed and easily observable, while others may only be present in a rudimentary form. So, in order to make the instructional-educational process more effective, it is necessary to considering the abilities and inclinations of each pupil at music classes for designing and carrying out activities, not only to enhance and strengthen their abilities, but also to meet their needs.

This article aims to explore the application of the theory of multiple intelligences to music classes. Proposing an innovative approach to teaching-learning-assessment strategies, the article analyzes the relevance of each type of intelligence in specific lesson approaches and, at the same time, provides concrete examples of teaching activities and games that capitalize on these intelligences.

Keywords:

Multiple intelligences, didactic strategy, music education, interdisciplinarity, connections, cognitive diversity, skills.

INTRODUCTION

Music education has often been limited to the use and development of traditional musical skills such as: vocal and/or instrumental singing, solfege, scales intonation,

meter, rhythmic playing or melodic composition. This narrow approach tends to ignore, however, the musical potential of pupils who display other types of intelligence in addition to musical intelligence, according to the theory proposed by Howard Gardner in his paper *Frames of Mind: The Theory of Multiple Intelligences* (Gardner, 1983). In particular, the specific literature supports the idea that linguistically intelligent pupils can be very good at analyzing song texts and that spatially intelligent pupils can easily create visual representations of musical structures (Lazear, 1991).

The theory referred to in this article provides a new perspective on people's cognitive abilities, going beyond the traditional conception that reduces intelligence to logical-mathematical and linguistic abilities. Each of them representing a distinct way of processing information, the eight types of intelligence can work together to transform music education from a discipline on its own into a discipline that integrates other disciplines in the framework with which it has numerous connections. In other words, recognizing students' cognitive diversity and multiple forms of intelligence provide teachers with a valuable context for instructional design that allows them to adapt teaching-learning-assessment strategies to the individual needs and abilities of learners while creating an inclusive, motivating and effective learning environment. (Campbell, Campbell & Dickinson, 1996; Armstrong, 2009).

1. Multiple Intelligences Theory

1.1. Theoretical landmarks

The theory of multiple intelligences, developed by psychologist Howard Gardner (Gardner, 1983), represents an innovative perspective on the concept of intelligence. Instead of considering it as a singular and general ability, Gardner proposes the existence of a set of eight distinct intelligences, each with its own characteristics and ways of manifestation. Thus, the ability to use written and spoken language effectively has been called *linguistic intelligence*, the ability to think logically, understand abstract concepts and solve mathematical problems has been called *logical-mathematical intelligence*, the ability to operate with spatial and visual information has been characterized as *spatial intelligence*, musical skills have been attributed to *musical intelligence*, the ability to coordinate movements of the body became *bodily-kinesthetic intelligence*, the ability to understand others and interact effectively with them was termed *interpersonal intelligence*, the ability to understand oneself and to be aware of one's own emotions and motivations was termed *intrapersonal intelligence*, and the ability to recognize and classify elements in nature was considered *naturalistic intelligence*.

Over the years, the theory has been used in various educational contexts and has been validated by numerous studies and research in the field. It emphasizes the importance

of recognizing and valuing the diversity of human cognitive capacities and the need to adapt teaching, learning and assessment strategies to the individual intelligence profiles that students demonstrate.

1.2. Multiple Intelligences Questionnaire

The questionnaire that I propose is intended to be applied to pupils in their first music class in the 5th grade, at the beginning of the cycle, in order to demonstrate its usefulness throughout the middle school years, but it can also be applied in other times of the school year, as well as at other grades. It is based on the theory of multiple intelligences developed by Howard Gardner and it is divided into eight sections, each section containing five statements relating to a particular type of intelligence. It aims to identify which type(s) of intelligence each individual pupil possesses and its corresponding ratio, so that a pupil-specific Multiple Intelligences Profile can be determined and personalized activities can be designed based on this.

In creating the questionnaire, I tried to formulate clear and relevant questions for each type of intelligence considering the level of understanding of 5th graders and adapting the content and language used.

Instructions: Read each statement carefully and choose the option that suits you best!

Table 1. Questionnaire

	<i>Yes, very much/ Yes, I'm very good at</i>	<i>Sometimes, when I'm in the mood / I can manage</i>	<i>No, not at all/ I don't know</i>
Section I - Linguistic intelligence			
<i>I like to read books, magazines or newspaper articles</i>			
<i>I like to write stories, poems or descriptions</i>			
<i>I like and am good at word games (anagrams, crosswords) and riddles</i>			
<i>I enjoy speaking in front of the class, reading homework aloud, reciting poetry or presenting projects</i>			
<i>I remember very easily the information I hear</i>			
Section II - Logical and mathematical intelligence			
<i>I enjoy doing exercises and solving math and/or physics problems</i>			
<i>I'm good at logic games, strategic games and puzzles</i>			
<i>I like to experiment and discover how things are built/ how things work</i>			

<i>I like graphic organizers (sketches, comparative tables, graphs, charts, mind maps, diagrams, etc.)</i>			
<i>I like working with numbers and doing calculations both written and mental</i>			
Section III - Spatial Intelligence			
<i>I like to draw and paint both physically by hand and on the computer, using different applications</i>			
<i>I'm good at reading maps, I orient myself easily in space and it's always easy to get bearings</i>			
<i>I like to build things out of Lego or out any other materials (cardboard, wood, paper, polystyrene)</i>			
<i>I like watching movies, videos and cartoons and analyzing the frames</i>			
<i>I like making 3D models in my head or out of plasticine</i>			
Section IV - Musical intelligence			
<i>I like playing or listening to music</i>			
<i>I easily recognize rhythms or melodies</i>			
<i>I like to play a musical instrument</i>			
<i>I like to compose songs or write lyrics for different songs</i>			
<i>I like to analyze the structure of songs I sing or listen to at school or at home</i>			
Section V - Bodily-kinesthetic intelligence			
<i>I like doing sport or dancing</i>			
<i>I can easily coordinate my body movements</i>			
<i>I like to build different objects with my hands</i>			
<i>I like games that involve movement</i>			
<i>I like learning new things through movement and concrete action</i>			
Section VI - Interpersonal intelligence			
<i>I enjoy working in a team and helping my colleagues</i>			
<i>I am empathic and I easily understand the feelings and emotions of others</i>			
<i>I like having many friends and spending my free time with them</i>			
<i>I enjoy resolving conflicts between colleagues and helping them to reconcile</i>			
<i>I like learning new things from other</i>			
Section VII - Intrapersonal intelligence			
<i>I like to reflect on thoughts and feelings</i>			

<i>I set goals and plan my activities rigorously</i>			
<i>I like spending time alone and thinking about important things</i>			
<i>I like to write in the journal and express my thoughts in writing</i>			
<i>I enjoy learning new things about myself and how I function as a human being</i>			
Section VIII - Naturalistic intelligence			
<i>I enjoy spending time in nature and observing plants and animals</i>			
<i>I easily retain and recognize different plant and animal species</i>			
<i>I like gardening or caring about animals</i>			
<i>I enjoy learning new things about the environment, nature and natural phenomena</i>			
<i>I like collecting stones, plants, shells or other objects from nature</i>			

1.3. Collection and interpretation of results

In order to analyze and interpret the results of the questionnaire and also to try to draw some sort of profile of multiple intelligences for each student, a certain number of points will be assigned to each response pattern. Thus, each 'Yes, very much/ Yes, I am very good at' answer will be given 3 points, the intermediate answer will be given 2 points and the negative answer will be given 1 point. The points obtained for the questions within a section will then be added together. The maximum score per section cannot exceed a total of 15 points due to the fact that only five statements are mentioned for each section.

The interpretation of the scores obtained by the students per section will be based on the division of the types of intelligence into three categories according to the scores as follows:

- category *a* = 12-15 points;
- category *b* = 8-11 points;
- category *c* = 5-7 points.

Category *a* will thus include the most developed types of intelligence for which the pupils concerned show significant interest and ability. Category *b* will illustrate those types of intelligence which are moderately developed and for which pupils show average aptitude and ability, and the last category will represent those types of intelligence which are least developed and for which pupils show low interest. After calculating the scores for each section and placing the corresponding intelligence type into one of the categories described, a profile of the pupil's multiple intelligences can be created, which will show both the pupil's strengths and weaknesses.

Having as a starting point the profile of the student's multiple intelligences, it will be possible to provide personalized recommendations, to plan and carry out activities and teaching-learning strategies that build on the student's strengths, but also to help improve the weaker parts and, last but not least, to encourage and help the student in the process of exploring and developing their own intelligences.

Collecting the results of the questionnaire can be done both physically, by marking on a separate sheet each individual answer, and digitally, by using the Google forms application which facilitates data collection process and shortens the time needed to collect the data. At the same time, the application offers the opportunity to set and calculate the scores in real time, which is another advantage in that the teacher's effort in this preliminary stage of interpreting the results is considerably reduced.

2. ways to capitalize the types of intelligence in music classes

2.1. Multiple Intelligences and Music Education

Applying the theory of multiple intelligences to music classes transforms classical lessons into exciting experiences that allow and favor the use of varied, interactive teaching strategies, adapted to the diversity of students and their individual potential. To this end, it is recommended that a variety of teaching materials be used in the classroom, activities such as vocal and/or instrumental performance, listening, dancing, composition, music analysis, etc., cooperative learning and collaboration through teamwork tasks, individualized feedback, and a variety of assessment methods be encouraged.

The benefits that the application of the theory of multiple intelligences reveals are the possibility of personalization of learning (through which teachers adapt teaching methods to the individual needs and interests of students), increased motivation (through the opportunity to capitalize on their strengths), developing creativity (by putting the pupil in the position of creating a song, a text, an object, etc.), improving learning outcomes and, last but not least, creating an inclusive learning environment where pupils feel accepted regardless of their intelligence and where they have the opportunity to demonstrate and develop their skills.

By far the most relevant type of intelligence in music education is musical intelligence. Pupils who show a considerable development of musical intelligence are sensitive to sounds and rhythms, easily learn rhythmic and melodic passages which they are always able to play back, easily grasp harmonic or polyphonic fragments and can analyze different pieces of music provided. However, the other types of intelligence should not be neglected either because, if properly addressed in music education

classes, they can contribute to pupils' harmonious development and help them to assimilate and fix musical knowledge.

2.2. Examples of specific teaching activities

The most demanding part for the teacher, the most time-consuming and the one that tests his/her creativity and ability to work differentially with students, is the planning, designing and realization of activities that exploit each type of intelligence.

In order to capitalize on linguistic intelligence, we identified activities such as: analyzing song texts with discussions about the message of the lyrics, figures of speech, prosody or poetic imagery; composing lyrics for one's own song or for one that already exists, writing reviews of some songs or music albums; debates on topics such as the impact of music on society, the influence of politics on music, musical genres, performers or bands; writing stories based on certain musical fragments or games such as *Word Association*, *Musical Words*, *Guess the Lyrics*, *Continue the Lyrics*, *Continue the Musical Story* or *Interview with the Artist*.

Teaching activities that can address logical-mathematical intelligence can take the form of analyzing musical structures (identifying the form, harmonic structure, rhythmic patterns or changes of measure or tempo), studying the logical path, building the logical construction of the range, the ways of forming intervals, and chords, creating rhythms from mathematical models such as arithmetic progressions or Fibonacci sequences, graphical representation of the evolution of dynamics or tempo variations, creating concept maps, creating musical compositions using specialized software, games involving putting together rhythm puzzles to obtain a given rhythmic sequence, musical logic games, games to identify the underlying rule of a given rhythmic-melodic sequence, musical mathematics games in which pupils have to carry out operations with different note values and rests, and games involving deciphering musical codes based on notes, rhythms, note values and rests or symbols.

In order to exploit spatial literacy, pupils can be asked to create visual scores, music charts, musical maps or diagrams of musical structures, choreographies and videos combining images, sounds and movement, draw the emotions conveyed by a particular song, or decorate the classroom to illustrate a musical environment. Teaching games specific to this type of intelligence could be called *visual music puzzles*, *music maps*, *music mime*, *music draw* or *music spot the differences*.

Musical intelligence can be easily developed in specialized lessons through individual, group or group vocal and/or instrumental performance activities, musical composition activities, active listening, musical improvisation, organization of musical evenings and performances and different didactic games (*Guess the melody*, *Chain*

rhythms, Guess the instrument, Random wheel, Mixed melodies, The mute conductor, In the world of C etc.).

From the point of view of bodily-kinesthetic intelligence, music education classes can design, organize and carry out activities involving dance, body percussion, leading a group, transforming a song into a play, building musical instruments from recycled materials, but also games such as *musical statues or musical mime*.

Some of the tasks that can be assigned to students to exploit interpersonal intelligence include: performing songs as a group, aiming to develop collaboration and harmonization skills, forming vocal or instrumental ensembles, carrying out group music projects, engaging students in discussions about the emotions conveyed through music, conducting interviews with different musicians or participating in didactic games of improvising an orchestra, composing melodies in a chain, associating a musical fragment with different emotions, identifying the emotion conveyed by a melody or playing musical fragments that suggest and generate different emotions.

Making a musical journal in which students express their emotions, thoughts and opinions, writing reflections on their musical experiences, organizing moments of meditation with music, setting individual musical goals and monitoring their own progress and games such as *My Inner Melody, Inner Musical Journey or Musical Self-Portrait* in which students are asked to present melodies and melodic fragments in/with which they identify themselves are just some examples of activities aimed at developing intrapersonal intelligence.

For students who demonstrate a high naturalistic intelligence, the teacher can propose activities such as listening and analyzing the sounds of nature, making musical instruments from materials found in nature, composing melodies inspired by nature, making collages with sounds from nature, organizing outings in nature in order to record sounds or observe some rhythms that can be distinguished in nature or games suggestively entitled *Nature Orchestra, Natural Rhythms, Animal Melodies or Sounds and Landscapes*.

Discussion

Students' cognitive diversity, as highlighted by Gardner's theory of multiple intelligences, is a valuable resource in the teaching-learning process. Recognizing and valuing different types of intelligence enables teachers to create an inclusive and effective learning environment in which every student feels valued and supported, regardless of the dominant type of intelligence.

Applying the theory of multiple intelligences to music education classes requires adapting teaching strategies to meet the individual needs of students. The use

of a variety of activities, games and teaching materials ensures active engagement and a deep understanding of musical concepts.

The proposed questionnaire and the methods for interpreting the results offer teachers the possibility to personalize learning, adapting activities and teaching strategies to the individual intelligence profiles of students. This helps to increase motivation and performance. Moreover, by correctly addressing all types of intelligences in music education classes, it contributes to pupils' harmonious development, both musically and personally. This enables them to explore and develop their own talents and skills.

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