



Music for Dyslexics: A way to Improve

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"If I don't learn the way you teach, can you teach me the way I learn?"

(Miles, Westcombe 2002)

This is a quote often used in the field of education. As a future teacher I wanted to start this paper with it, to introduce the topic of which I am writing about: dyslexia and music.

Before examining in depth the argument, I will deal with the definition of dyslexia, the possible causes and how it is assessed, referring specifically to the rules and laws of my country, Italy.

WHAT IS DEVELOPMENTAL DYSLEXIA:

Dyslexia is considered part of a wider category of the learning specific difficulties, called DSA (Disturbi Specifici dell'Apprendimento) in Italy. A single definition of dyslexia doesn't exist; every country has its own way of defining the problem. As regarding my country, it follows the definition of the International Dyslexia Association, that is:

"Dyslexia is characterized by difficulties with accurate and / or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge." (International Dyslexia Association)

As it can be seen from the description above, dyslexia is a condition characterized by different impairments, but it is not a disease and, because of this, a cure doesn't exist. Despite that, children or in general people with dyslexia can be helped using different strategies. Some of them has already been tested, others are still being tested by researchers. In this paper the focus will be on some research that have been done in the field of music, and in particular on the search for strategies concerning music that could help dyslexic children to cope with their difficulties.

POSSIBLE CAUSES OF DYSLEXIA:

In terms of causes, little is known for sure. Research have shown that dyslexia has a neurological basis (Habib, 2000), and others that is genetic (Francks, 2002). Nowadays, the main followed theory is that about the phonological deficit, which I will describe in the next paragraph.

The phonological deficit theory:

The phonological deficit theory is the best known theory about developmental dyslexia. It assumes that what is damaged in dyslexic people is the ability to represent, to store and to retrieve the smallest units of speech, in other words, the phonemes (Caylak, 2010). The acquisition of the correspondence grapheme-phoneme is, indeed, a fundamental prerequisite for the ability of reading, and if the child cannot see the connections between the written symbol and its sound, he

will experience significant difficulties. The supporters of the theory believe that this impairment plays a crucial and causal role in the manifestation of dyslexia. Many research have been done on it, and low performances in the phonological awareness have been found in people with dyslexia.

HOW IT IS ASSESSED:

To diagnose dyslexia, the above mentioned difficulties have to be present, in association with other conditions:

- An average QI ($QI \geq 85$)
- Poor performance in reading skills comparing with children of the same age – performance below II standard deviations expected for that age
- The child must not present other disorder, such as neurological or sensorial disorder

To assess dyslexia many tests are used. For instance, tests that measure phonological awareness, verbal short term memory and rapid naming (RAN). (Law, 2015)

Italian legislation about dyslexia:

The law that talks about dyslexia is the n. 170 of the 8th October 2010. Until few years ago, dyslexia was mentioned in the law n. 104 of the 5th of February 1992, which was about disabled people, and, since the dyslexic child could not be diagnosed as a disabled, he didn't receive any help. Now that we have a law specifically for children with learning difficulties, children who have being diagnosed have the rights of having four things:

- Dispensatory measures, which represent the possibility for the child to not to do specific activities that he is not able to do;
- Compensatory instruments, which are those instruments that help the child doing activities that otherwise he could not do alone (e.g. informatics supports)
- A PDP (Piano Didattico Personalizzato), that is a customized curriculum, tailored for the child, that takes into account his difficulties. This is edited by teachers, family and health and social institutions together.
- Adaptations in the evaluation, which means that, as a teacher, you can use different instruments for the evaluation of the dyslexic child, catered to his limitations and needs.

THE RELATIONSHIP BETWEEN MUSIC AND DYSLEXIA:

What I found most interesting while reading articles about music and dyslexia were in particular two works and research conducted by two women: one is Dr Katie Overy and the other is the Suzuki piano teacher Jenny Macmillan. Their contribution to the topic are slightly different but I wanted to write about their programme to have an overview of two different perspective in working with dyslexic children.

Timing skills in dyslexic children:

Many researchers conducted studies to spot the difficulties of dyslexic children. In addition, some of them focused on the relationship between literacy skills and music.

Indeed, music and language are two separate way in which the human being communicates, but at the same time, they are bound by a lot of similarities. To begin with, both are ways of communication that use auditory unit sequences. These are elaborate, settled and culturally definite. Moreover, both entail individual's attention and memory, so that he is able to handle incoming information and to give an interpretation to them; so, both music and language, are something that happens in time. Finally, language as well as music, develops naturally in children, but for both of them years and training are required to be able to handle them (Miles, Westcombe, Ditchfield, 2008).

This premise is very important when it comes to talk about dyslexia and music, because it links many literacy difficulties with music skills and it opens a door for a possibility to consider music helpful for dyslexic children's development and in particular for the development of their writing, spelling and reading skills.

A researcher that investigated in this relationship is Katie Overy. In particular, she and other researchers, conducted a study on dyslexic children's music skills and for this sake they designed a battery of tests (MATs), which measured musical aptitude of children. It represents a small-scale research because only 15 dyslexic children and 11 children with normal development were tested. However, what Overy and her colleagues find out was that dyslexic children were significantly worse in timing skills than the control group, but they scored highly in tasks concerning pitch skills (Overy 2001).

Timing skills are a common element of various theories about dyslexia, and in particular they are said to be a cause of the deficit in phonological skills. The problem apparently lays on temporal processing deficits and timing deficits, and it encompass the auditory and motor domains. Indeed, children with dyslexia were found to be impaired in tasks concerning the ability to "keep the time" such as rhythm tapping (Wolff, Michel, Ovrut and Drake, 1990) or time estimation (Nicolson, Fawcett, and Dean, 1995).

In particular, a very interesting finding of Overy's research, was the correlation between "*spelling ability and the skill of tapping out the rhythm of a song, which both involve the skill of syllable segmentation*" (Overy, 2001). This is a significant and powerful discovery because it really constitutes a possibility to work with music, and in particular with rhythm activities, with dyslexic children, developing the ability of literacy spelling and language skills in general.

Thanks to this, and other discoveries from other studies, Overy has designed a programme of musical activities and games which can help dyslexic children within many domains: concentration,

memory, motor co-ordination and sequencing (Miles, Westcombe, Ditchfield, 2008). The programme was also designed to test if music, and musical activities could have been a boost to improve language and literacy skills. However, the more immediate aim was that of improving musical timing skills. In addition, the programme also followed particular techniques, that are known to be useful for children with dyslexia, such as multisensory approach, repetition and the fact of learning step by step.

In doing so, Overy analyzed three types of musical approach to education, that are: “*Growing with music*” (Stocks and Maddocks, 1992), “*Education through music*” (ETM) (Richards, 1977), and “*Earwiggo again – Rhythm games*” (West and Holdstock, 1985).

The first two are based on the Kodály’s theory of music education. Kodály was an Hungarian linguist, philosopher, composer, musicologist and educator, who was called by the Hungarian school to design an educational “method” to teach music. His method is based on these assumptions: the importance of singing for literacy development, the importance to learn musical reading and writing early, through the use of chironomy and the rhythmic activities with syllables.

In particular, there are many aspects of the with approach “*Growing music*” that are relevant and helpful for dyslexic children: the fact that simple songs are used encourage dyslexic children, because they are not challenged by difficulties and they can work in a relaxed and positive environment. Moreover, musical concepts and skills are taught in a detailed, repetitive and explicit way, and this fosters dyslexic children development. Furthermore, the activities last for a few minutes, so that dyslexic children, that usually present a difficulty to concentrate for long period, can benefit of all the positive aspects and finally, also the body is involved in these tasks, so that children can train their motor skills, thing that is very important in dyslexic people.

Also in the case of “*Education through music*” and “*Earwiggo again – Rhythm games*”, the positive aspects regard fostering motor-coordination, working in a safe, positive and creative environment and training rhythmic abilities.

Drawing on these three perspective, many activities were designed: I will present some of them, underlying the positive aspects for dyslexic children.

The name game: is a game in which children are sitting a circle. The teacher starts clapping a rhythm on his/her knees, that children have to copy. The rhythm is the following:

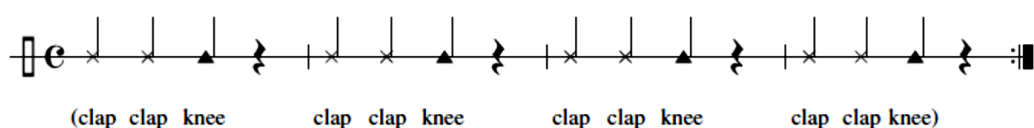


Figure 4.1. The Name Game clapping pattern.

Figure 1. From “*Music and Dyslexia: A Positive Approach*” (Miles, Westcombe, Ditchfield, 2008) p. 35

Then the teacher explains to the children that they have to say their name in the gap between the claps. Once children become used to do it, the teacher will change word categories going on with names of colors or other things. Children have to keep the rhythm and think about other words.

This game contains in itself various positive aspects for dyslexic children. To begin with, the first category of words that is used is that of names. This because it is important to start with something with which children are already comfortable, so that they can easily identify the rhythm of these words, that is nothing but the syllables division of those words. In addition, this activities can train

motor-rhythmic skills because when the teacher changes words category, children will focus on which word to say and they will clap the rhythm automatically, training their abilities on this task. Finally, the whole environment is non-judgmental, the focus is far from children's mistakes, so that they can experience a funny and unhurried atmosphere, that is the first step to an effective learning (Miles, Westcombe, Ditchfield, 2008).

Spot the difference: children stand in a circle and the teacher starts by clapping a number of beats. Every child has to copy that rhythm until it return to the teacher. Then, every child will have the possibility to start a own rhythm, which will be copied by the others, and sometimes the teacher will indicate a child to change the rhythm. After that, one child will leave the room and in the meanwhile the teacher will charge one of the children to change the rhythm. When the pupil that has gone out return, he/she will have to guess who is changing the rhythm.

This game is very important to train both fine-motor skills, as the children have to copy the rhythm with hands, and listening skill, as they have to pay attention to the child who changes the rhythm and discriminate the differences between the rhythms (Miles, Westcombe, Ditchfield, 2008).

These and other games were tested in different primary schools and results showed meaningful improvements in phonological abilities and, in some cases improvements in literacy abilities. Nevertheless, reading improvement were not seen (Overy, 2003).

This means that music is a meaningful tool to help dyslexic children, also because it represents the opportunity of a multisensory approach, that is extremely suitable for them. Additionally, this type of activities are very flexible and they can be used at any age, from the pre-school age onwards (Overy, 2003).

The Suzuki Method for dyslexic children:

This second perspective is more focused on learning to play any instruments than to improve literacy skills, but it represents anyway a means to help dyslexic children to cope with their main difficulties: auditory and motor skills, rhythmic skills, concentration, memory, reading and sight-reading.

Jenny Macmillan, a Suzuki piano teacher, has worked with dyslexic children and she argues that the Suzuki approach is extremely suitable for dyslexic children, because it comprises all the aspects and techniques that create an environment in which dyslexic children do well. To be specific, as she claims:

"These children often respond well to teaching approaches that are structured, sequential, cumulative, thorough and multi-sensory. The Suzuki approach is all of these." (Macmillan, 2008)

And also:

"Plenty of listening to music, repetition of assignments, participating in group lessons, learning initially by ear and building self-confidence are to be recommended for children with dyslexia. These issues are all addressed by the Suzuki approach." (Miles, Westcombe, Ditchfield, 2008)

In particular, she pointed out ten characteristics of the Suzuki approach that underpin the usefulness for the dyslexic children:

1. *Parental involvement.* This represents an important element in the Suzuki approach, and it is even more relevant in case of dyslexic children, as they may need more support starting a new activity.
2. *Listening.* Suzuki thought that, as a child acquires his/her mother-tongue by being exposed to it, he/she can also learn music by being surrounded by music. (Suzuki, 1978) As they have difficulties to read, learning by listening is extremely important to dyslexic children. Moreover, the development of listening skills could help dyslexic children's concentration.
3. *Observation.* Observing the other children playing is also a powerful method to learn.
4. *Demonstration.* The teacher in Suzuki method helps the child by demonstrate what he/she has to do, step by step. This is relevant for all children, but even more with dyslexics, who don't master reading skills very well.
5. *Step-by-step mastery.* As mentioned before, the teacher will progress with the teaching step by step, waiting the child to be ready to move to a further one. This techniques will also foster the child self-esteem, that is not an insignificant thing to take into account.
6. *Memory.* Children that follow the Suzuki approach will first learn by heart what they have to play, without reading the notes. This is a positive factor for dyslexics.
7. *Common core repertoire.* The collection of pieces of every instrument is structure in a way that every new piece adds some new technique to the previous. This is another aspect of the step-by-step teaching style.
8. *Review.* The pieces that are played are not forgotten. The child is invited to hold onto them, in order to achieve a profound learning.
9. *Group work.* It helps to improve social skills at the same time of the musical ones.
10. *Early start.* Usually, in the Suzuki method, children are suggested to start from 3-4 years old, but in the case of dyslexic children this is not that important, as they usually need more time to become independent from their parents.

(Macmillan, 2008)

In conclusion, she claims that the Suzuki approach is a powerful means to help children with dyslexia, making also reference to the work of Overy that I explained above. (Macmillan, 2007)

Critical reflection:

I find the activities proposed by Overy in her programme extremely interesting and useful. Most of the time music is wrongly underestimated in the school, but these research are helping music to regain an important position in the education of children, the one it deserves.

These activities are easy to do, and the teacher doesn't need to have a high musical experience. This flexibility, moreover, allow the parents to do themselves the games with their offspring, giving so a significant help to what the school and teachers already do.

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