

ARTISTIC LANGUAGES IN EARLY CHILDHOOD EDUCATION:
SYNAESTHETIC STUDY IN CHILDREN AGED 4 AND 5 (ALBACETE, SPAIN)

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Abstract. This research aims to find out the relationship between music and colours according to the perception of pre-school pupils in Albacete (Spain).

Keywords: early childhood education; musical education; arts; synesthesia; emotions.

Introduction

Early Childhood Education is a key stage for the development of the whole child, encompassing cognitive, emotional, social and motor aspects. During this stage of rapid growth, it is essential to provide experiences that favour their development (Hasnani et al., 2024).

Art stimulates creativity, self-expression and cognitive and emotional development, fostering critical thinking and connection to the environment (Qiao et al., 2021).

Synaesthesia, particularly music-colour, involves the association between sounds and colours according to acoustic properties such as tonality, timbre and intensity (Palmer et al., 2013). These associations follow specific patterns, relating major and high tones to bright colours, and minor and low tones to dark colours (Ramachandran & Hubbard, 2001). Recent studies suggest that mild forms of synaesthesia are present in the general population, influencing artistic perception (Deroy & Spence, 2013).

From this perspective, the aim of this research was to discover the typology of music-colour connections in pre-school students in schools in Albacete through graphic and visual representations of the different musical works.

METHODOLOGY

The methodology used was a mixed approach, combining qualitative and quantitative techniques. The qualitative approach was used to carry out an exhaustive and detailed analysis of the drawings made by the participants, which allowed for an in-depth interpretation of the subjective and stylistic aspects (Mujica, 2012). Subsequently, a quantitative approach has been applied for the collection and analysis of numerical data obtained in the evaluation, which has been used to measure specific parameters, such as the predominant colours in the works (Hernández-Sampieri and Mendoza, 2018).

For this purpose, a sample of children between 4 and 5 years of age was selected from pre-school classrooms in Albacete, who were exposed to fragments of various musical pieces of different genres during controlled sessions. After listening to the musical fragments, they were asked to choose the colour that, from their perspective, best represented each piece of music, choosing from a predefined palette of colours. This procedure builds on previous studies on synaesthesia and multisensory perception, which suggest that music can evoke chromatic associations related to acoustic properties such as timbre, pitch and rhythm (Palmer et al., 2013). In addition, constructivist approaches to child development have been taken into account, which postulate that children assign symbolic meanings to sensory stimuli according to their experience and learning (Piaget, 1951).

The data obtained were analysed using descriptive statistical techniques to identify patterns of association between the selected colours and the musical genres, which allowed us to infer trends in the chromatic-musical perception of the participants. The selection of the musical pieces was carried out by means of convenience sampling, following the indications of Campbell (2000) and Rodrigo (2008).

Proposal

This proposal seeks to harness art in the classroom as a tool to access student perspectives beyond verbal language. Abstract expressionism fosters autonomy, confidence, creativity and

free expression, while the choice of colours can provide valuable but often overlooked information in education. Likewise, music, as a universal language, stimulates emotions and generates individual responses depending on the musical genre. During practice, each student's personal interpretation of the work has been considered. In order to preserve the authenticity of the results, no prior information was given about the musical works. The students were given simple instructions: to work individually, selecting the colours that inspired them for each piece, so that they could be captured on paper, maintaining an atmosphere of silence to avoid external influences. Each session was divided into three parts: first, the children listened to the music with their eyes closed to promote greater immersion; then, they recorded their interpretation on paper; and finally, they verbally described their drawings.

RESULTS

When analysing the drawings, four key characteristics related to the children's personalities were identified: the size of the line, the pressure exerted, the rhythm and harmony of the marks, which provided indications of the children's sociability, emotionality, decision-making skills and personal development.

After each of the sessions, we proceeded to analyse the colours used in each of the musical pieces. To do this, we considered the majority of the resulting colours in each of the proposals, highlighting: yellow, blue, magenta, black, red, brown, purple, orange, green and grey. From these, a selection of colorimetry has been made to relate the influence of these colours to each of these musical pieces.

Table 1. Predominant colours in a selection of the musical pieces worked

A	Mu	Y	B	P	B	R	B	P	O	G	G
uditi	sical	ellow	lue	ink	lack	ed	rown	urple	range	reen	rey
on	style	%	%	%	%	%	%	%	%	%	%
1	Roc	1	-	-	3	3	1	7,	-	-	-
.	k	5,4			0,8	0,8	5,4	7			
2	Cla	1	8	1	3	-	-	4,	24	2	-
.	ssical	9,4	,7	4,6	,9			9	,3	4,3	
	music										
	(orchest										
	ra)										
3	Co	1	6	6	3	1	1,	5	5	-	1
.	ntempo	0	,7	,7	1,7	6,7	7				6,7
	rary										
	music										
4	Cla	1,	6	-	3	2	-	1	3,	3,	1
.	ssical	6	,5		3,9	1		6,1	2	2	4,5
	music										
	(soloist)										

In hearing 1, warm colours predominate, with black and red standing out, followed by brown, yellow and purple (predominance of warm colours). In audition 2, yellow, orange and green stand out, while purple and black are the least used, again showing a preference for warm tones. Despite the diversity of styles in both works, the melodic predominance over the rest of the musical instruments has meant a greater presence of warm tonalities. In audition 3, black is the most frequently used, followed by grey and red, while purple, orange and brown are the least frequent, reflecting the influence of heavy instrumentation and complex rhythms. Finally, in listening 4, black and red predominate, with orange, green and yellow being the least used. In the latter two, the most prominent musical element is rhythm, which is evident in the chromatic change selected by the pupils. Likewise, the drawings relating to auditions 2 and 4 have a theme related to monsters, ghosts or dangerous animals that show a link with the percussive and energetic use of musical elements.

Conclusions

The results obtained in this research show how the different musical genres used are reflected in the drawing. The different musical genres have a specific impact on the style and execution of the drawing. This information, derived from both the evaluation of the works and the qualitative analysis of the drawings, validates the premise that emotional states are manifested in artistic productions. Furthermore, this relationship is reinforced by research on the influence of music on emotions and creativity (Hanna-Pladdy, 2011), underlining the importance of music as a catalyst for emotional expression.

Abstract expressionism offers a valuable opportunity for expression in the classroom, where children's drawing acts as a more effective means of communication than verbal language in early stages. Through it, children externalise their cognition, emotions and perception of the environment. An example of this is the fact that in those works with a more rhythmic character (2 and 4) the line is firmer than in those with a more melodic character, having been represented by a lighter line.

In addition to reflecting creativity, drawing reveals deep aspects of personality, being useful for identifying possible emotional or social difficulties, such as the presence of drawings of dangerous or disturbing elements in those works that are eminently melodic and of a serene character. Therefore, art should be a space of creative freedom that fosters autonomy and confidence, avoiding restrictions that may limit authentic expression and creative development.

In conclusion, arts education is fundamental for the integral development of students, enriching their emotional, social and cognitive formation. By encouraging free and creative expression, they are given the tools to understand the world and their own emotions, transcending the academic.

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