
Multimodality, semiotics and visual literacy in the art studio of primary school

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ABSTRACT : *The modern school proposes an interactive relationship between the learner and the curriculum content in a two-way and dynamic communication aimed at holistic learning. In this study we will examine how visual literacy and multimodal storytelling as languages of communication contribute to creative expression and learning. The different cognitive domains of primary school are connected through multimodal storytelling, revealing to young children that learning is a reflection of reality, which is unified and inseparable.*

KEYWORDS: *multimodality, multimodal storytelling, visual literacy, semiotic resources, visual communication*

I. INTRODUCTION

The languages of communication through art and the many different ways of expression will be our concern in this research. The example of the Reggio Emilia school teaches us that through playful learning young children are introduced to the grammar of materials and then to visual language. Visual communication in conjunction with the language elements unleashes the learner's skills of self-activity and discovery of the world in an interdisciplinary way, connecting the available resources through a dynamic learning process.

II. LITERATURE REVIEW

2.1 Multimodal storytelling and visual literacy

Multimodal works have multiple "ways" of communicating a message. Modes have been identified as, for example, speech, writing, image, music, gesture, body movement and modelling (Kress, 2000). A product can produce multimodal meanings through a holistic interpretation of it, challenging our multisensory perception. After all, our perception is by nature multisensory and therefore multimodal. It is impossible for a child by nature not to express themselves multimodally, they will accompany their words with physical movement, graphs or a crude plasticine creation to say something. Undoubtedly, multimodal interpretation requires the cultivation of visual literacy in order for the child to have the ability to interpret the codes of signals produced by visual stimuli and to later interpret an aesthetic experience with critical reflection. "To read means to run my gaze, but at the same time to decode the meaning of the painting. [...] But to decode a text, to understand its meaning, we must have a reading code. By analogy, we can say that in general the painting is a coded text" (Marin 2018:16).

According to Gunther Kress and Theo van Leeuwen (2001), modalities are "grammars of design", which use broad and abstract categories of elements, but provide quite specific rules for combining them into an infinite number of possible expressions. They are unframed and abstract, but also powerful in their use. Young

children are fascinated by the relationship between form and meaning, repeatedly experimenting with representations of objects, word graphs and representations of representations of other people (Gardner, 1980), "playing" with sign sources, exploring the different manifestations they can give them based on their choices. These 'meta-signifiers' are not some kind of copying, or repetition or reproduction of the original, but choices and adaptations (Kress et al., 2001).

2.2 The production of semiotic resources through design

In social semiotics, instead of the term sign, the term resource is preferred, suggesting that resources constitute signifiers, i.e. observable actions. In this study, the transformative process of selection, production and configuration of semiotic resources according to each child's expressive need in relation to visual representations is examined. Generally the product of the design is the final semiotic arrangement as it appears with signs and traces, revealing the way the representation was understood. This decision-making process while mostly hidden, nonetheless shows us much about how children perceive graphic representational design and how they shape and combine the semiotic resources they possess and select accordingly. In the age group of primary school pupils, especially up to eight years, the boundaries between writing and drawing as separate sign systems are indeed distinct but still challenge pupils. The interest in the way a child draws is mainly concerned with how phenomena are perceived as a consequence of their physical, psychological, emotional nature and their social and cultural environment (Kress, 2000) as well as how ideas, thoughts, feelings and attitudes are expressed in response to a representational or communicative need.

2.3 Multimodal storytelling of visual representations as a language of communication in schools in Reggio Emilia

One of the central tenets of Reggio Emilia schools that continues to guide the work of Italian teachers is the idea that every child is a creative child, full of potential, with the desire and right to find meaning in life within a context of relationships, in a variety of ways and using many 'languages' (Gandini, Cadwell, Hill, 2015). The emergent model of teaching and alternative modes of expression allow children freedom and diversity in expression, leading to the production of visual representations and graphs combined with linguistic elements such as footnotes and descriptions. In short, R. Emilia schools began teaching multimodality in expression in 1945, but did little more than allow their students to turn picture into word and word into graph through a playful and creative process with the natural childishness that governs children in their early years of education.

Carina Rinaldi (2006) observes that children at R.Emilia use the material as a communication tool and thus a story is created with it. She says that Italian teachers in Reggio Emilia use the phrase "A thousand languages" to describe the teaching method that allows expressive use of the material and goes on to argue that what attracted her to the schools was the use of languages with visual representations as building blocks of thoughts and emotions in the context of a holistic education of students, by highlighting children's ability to move from one language to another or from one "intelligence" to another. Giovanni Piazza in his "Grammar of Materials" introduces us to the grammar of visual terms and visual literacy as a form and language of communication (Edwards et al., 1998). As children use their minds and hands to act with a material, they begin to acquire skills (experience, strategy, rules) and develop structures that can be seen as a kind of alphabet or grammar. An alphabet is perhaps best described as the combination of the characteristics of a particular material together with the relationship that arises from its interaction with the way the child manipulates it (Gandini et al., 2015). J. Piaget argues that learning is supported by practice and children need to actively experiment with materials to gain real-world experience and develop their thinking (Pound, 2014). In this way, students bridge theory with practice and turn contact with materials into thinking and real-world experience in the physical world.

III. METHOD

The research, which is based on the author's thesis, includes a series of experimental projects, some of which are modular and some of which are stand-alone. The method for all the projects in this research is empirical and contains elements and tools of qualitative research. The experimental projects are based on the method of "Educational research-action", where the teacher becomes at the same time a researcher "presupposing the active participation of those involved in the field under investigation" (Katsarou&Tsafos, 2014). The research tools used in this experimental project include the results of the laboratory activities and simultaneously visual material from them, small and informal open discussions, participant observation and research journal keeping.

Participants

The subjects of the research are a group of twenty-five students from the same primary school, aged seven to twelve, and permission to participate has been granted by their parents and by the ethics committee of the university where the author's doctoral thesis is being conducted. This is a mixed group of students which is mainly composed of girls.

Description and objectives

The experiments were conducted in the visual arts laboratory of the same school and in an area of the school outside the laboratory. The duration of the implementation was one meeting lasting one and a half hours. Project Based Learning (PBL) was applied as the teaching method. Since empirical research is based on observation and experience gathering, it was important to have a central design and individual steps for the implementation of the experiment. In this way, any obstacles that may arise during the experiment can be addressed with alternatives or even shift the goal of the experiment.

Experiment description

Students create three-dimensional compositions from paper and display them, then observe their compositions and record notes and graphs from the visual stimuli they receive

Objectives

- Making associations from plastic works to visual and linguistic and elements.
- The narrative multimodal expression.
- Participatory and interactive work.

Data analysis and results

In order to clarify the data as collected it is important to follow the stages of the experiment's development. The group structure, how the focus group perceived the events and challenges, how they responded to them. That is, the way of thinking which is deciphered by the attempts, the modes, and also by the completed constructions and visual proposals. Also the stages of the development of a pedagogical project give the researcher and the reader information about the formation of perceptions and skills by the students during the project. In this way he can judge whether to proceed with an emergent programming with necessary changes, subtractions and additions.

The experiment design

Part 1 of the project: Creating a morphoplastic composition in group work

Students watch me cut strips of thin A4 photocopy paper and create inorganic schematic forms. Students are asked to pose an exploratory question about the potential of the simple paper material in a possible construction. Following this demonstration method, children are asked to work in groups of three to construct a three-dimensional composition from white paper. Their available materials are glue, paper and cardboard. It took the pupils about 40 minutes to form the three-dimensional composition. All three students in each group had the same construction role. At some point they had to step out of their personal "boundaries" and start

passing their paper shapes over or under each other's shapes. At first their movements were fearful and awkward, then they began to find rhythm with their classmates. I had to encourage them to lean on each other's shapes and encourage them to see their work as a team effort that achieves its goals (figure1).

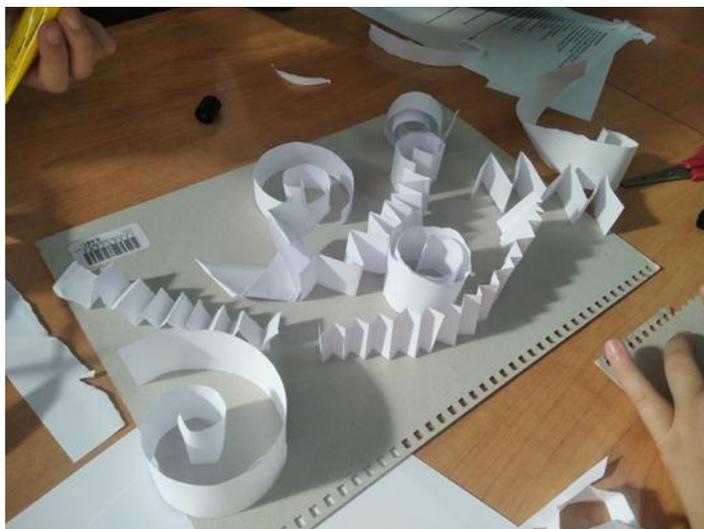


Figure 1: *Students work in groups and create the three-dimensional morphoplastic composition.*

Part 2 of the Project: Sketching the visual associations

In the second part of the project the students were encouraged to place their works in a semi-open space of the school. After observing the works of the other groups, the students took pencils and a two-fold cardboard to note and draw with visual representations and graphs what it was that they saw, they could even name it. In this way the children got into the process of moving in front of all the compositions and standing where they thought they wanted to note something, observing it and recording notes about it as if they were in an exhibition or a museum. Before recording the journals, the students spent some time observing the other groups' works and having some dialogues with each other. At this point a social connection seemed to develop between them about the project (figure 2).



Figure 2: *Students observe and take notes with graphs on the compositions of others.*

The transition from the visual experience to sketch was at first a difficult task and I subsequently urged the children to see it as a game. The students thought that they had to find what each composition reminded them of from their real life and translate it into a sketch, it was quite challenging to ask them not necessarily to contrast it with some tangible experience from their real life but to translate them spontaneously even into abstract shapes (figure 3).



Figure 3: *Students transform the 3D compositions to graphs through personal associations.*

Part 3 of the project: verbal narration of visual associations

Shortly afterwards, and after noticing that the students were beginning to enjoy this activity, they were asked to write down some notes about what they were seeing, not necessarily a title but a word that might come up as an association when observing the compositions. This made it even more difficult for the students, namely the connection between the graphs and the linguistic part and also the word representation within their free drawing. We called the diptychs "diaries" and they were later hung next to the compositions (Figure 4).



Figure 4: *The exhibition of diaries & compositions.*

Results

At the beginning the students were asked to transfer the 3D compositions to their notebook in graph form and as a second challenge they were asked to record notes on their drawing. While both modes of transformation made it difficult for them, in the first case they did very well. They each managed in their own personal style to describe either in unique schematic forms, sketches, or writing what they saw as they perceived it (figure 5).

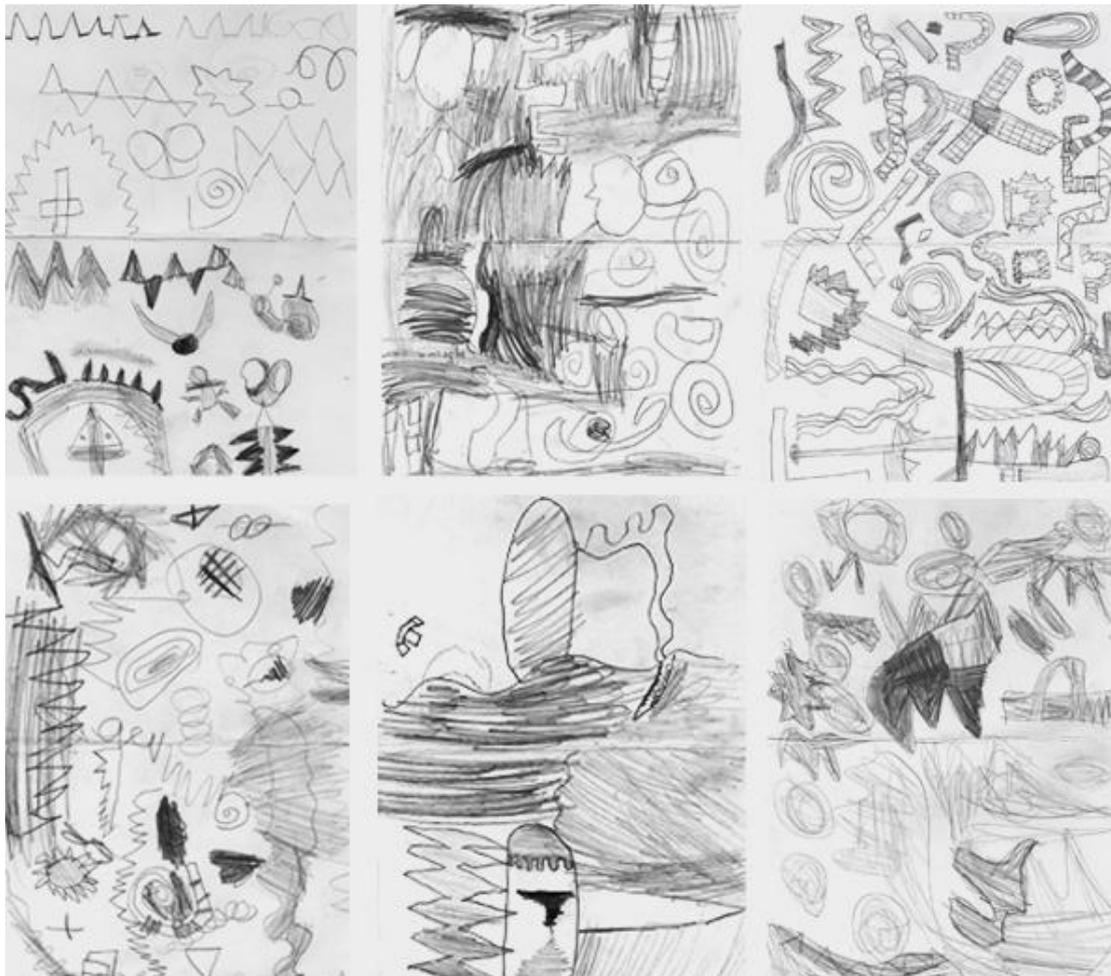


Figure5: *Transferring the 3D compositions to the notebooks in graph form.*

In the second case we did not have many results. In general, students are not used to inserting text into their visual representations and while they can easily create a comic strip and describe within a "cloud" what they want to say in words, the same does not happen when a word is inserted into the area of their visual representation.

The first problem is "what" to write, that is, in this case what linguistic transformations an abstract image creates, these transformations will be mentally formed and then transformed into written language, so the problem shifts to what they see, hence to visual literacy. Many times words such as "amusement park", "playground", "forest", "grass" were mentioned, but this may also have to do with the lack of experience at young ages. A few students dared to make a more abstract description, such as "full shape", a situation that

describes the student's exuberantly designed card in the picture , i.e. turning a new semiotic resource created by the student into a discourse (Figure 6).



Figure 6: Some successful transitions in linguistic multimodal expression.

A thing that was observed is that while students may have been able to express themselves very well in the spoken word, describing and interpreting, this does not mean that they did equally well in writing or in sketching communication. The multimodal educational process has the main advantage of covering the expression of pupils in many different ways. It is not necessary that a pupil can express himself in the whole range of ways that exist, but certainly observing another way of communication directly in his school social environment is a fact that can help him to develop other ways of expression.

Another issue which seemed to be of concern to the students was the 'invasion' of the word as a visual element within their work. But this sounds as a natural reaction as the words and the letters are already elements which carry a shape, a meaning and a story, so suddenly the student is faced with multiple questions such as if

the meaning or the shapes of the words morphologically fit with the picture. In this place we come to the aesthetics of typefaces and the stylistic features of syntax and writing, which are a separate chapter in their own right employing the fields of graphic arts.

IV. CONCLUSION

It is important for children to feel that they can express themselves freely about visual culture. What we discover in this experiment project is that students need to delve deeper into issues of aesthetics and the concepts that foster visual literacy. But to reach the desired point of "reading" images, especially images of contemporary visual culture, they need to be able to not take interpretations of their everyday experiences for granted without investigating them. Students should be comfortable using the vocabulary of visual and visual elements, with the deeper goal of being able to interpret the everyday visual stimuli that are storming into their lives, but also being able to form their own aesthetic experiences and pleasures in relation to their choices. When students are able to perceive the secrets of the image through their personal associations which can be captured in writing, graphs, and signals, then they will be able to create new languages of communication with interdisciplinary implications. Enjoying freedom of expression in many ways is a necessary condition for capturing the diversity and uniqueness of each child in the modern world.

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