





Illustrating with words, writing with images: Teaching portuguese language with visual arts¹

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ENG Abstract. This proposal presents a transdisciplinary pedagogical project on writing and illustration, framed within the formal teaching of Portuguese Language and Drawing subjects in the 12th grade of the Portuguese public education system. Innovative learning methodologies are proposed which aim to enrich educational experiences, to reinforce knowledge networks and social ties, to encourage paths of (self)discovery and to strengthen autonomous, complex, multidisciplinary and creative thinking. This approach, within the scope of the study of narrative-descriptive and poetic texts, was triggered by the handwritten notes the writer Eça de Queiroz kept in his cabinet and which constituted a fundamental strategy in his creative writing process. Thus, this project aims to develop in students from two different courses, the ability to freely transcribe something observed, to draw the visual imaginary after reading a colleague's text, to produce an illustration with a free theme and style and to write a text based on a colleague's drawing, assuming subjectivity and identity as determining dimensions in the creation of intertextual relations. The virtual presence of Eça de Queiroz Foundation on social networks was used to access and work with the writer's own materials.

Keywords: visual arts; visuality; teaching methods; cooperative learning; intertextuality.

ES Ilustrar con palabras, escribir con imágenes: Enseñar lengua portuguesa con artes visuales

Resumen. Esta propuesta presenta un ejemplo de proyecto pedagógico transdisciplinar, de escritura e ilustración, dentro de la enseñanza formal de las asignaturas de Portugués y Dibujo A en el 12º año del sistema público de enseñanza secundaria portugués. Se proponen metodologías de aprendizaje innovadoras, dirigidas a enriquecer las experiencias educativas, reforzar las redes de conocimiento y los lazos sociales, fomentar caminos de (auto)descubrimiento y fortalecer el pensamiento autónomo, complejo, multidisciplinar y creativo. Este enfoque, en el ámbito del estudio de textos narrativo-descriptivos y poéticos, fue desencadenado por las notas manuscritas que el escritor Eça de Queiroz guardaba en su mueble-archivo y que constituían una estrategia fundamental en su proceso de escritura creativa. Así, este proyecto pretendía desarrollar en alumnos de dos clases de diferentes cursos, la capacidad de transcribir libremente algo observado, dibujar el imaginario visual tras la lectura de un texto de un compañero, producir una ilustración con tema y estilo libres y escribir un texto a partir del dibujo de un compañero, asumiendo la subjetividad y la identidad como dimensiones determinantes en la creación de relaciones intertextuales. Se utilizó la presencia virtual de la Fundación Eça de Queiroz en las redes sociales para acceder y trabajar sobre material del propio escritor.

Palabras clave: artes visuales; visualidad; métodos de enseñanza; aprendizaje cooperativo; intertextualidad.

Summary. 1. Introduction. 1.1. Main theoretical-conceptual references: Learning mechanisms, Visual culture, Visuality and Intertextuality. 1.2. The role of social networks in the project. 2. Framework and development of the project, methodologies and main artistic results. 3. Conclusions. References.

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1. Introduction

It is highlighted the clear evidence of the role that the Artistic Education can assume in a interdisciplinary didactic-pedagogical project proposing an interacting challenge between Portuguese classes and Drawing A classes. This way, both languages (verbal / graphic), different perceptions (observing / reading) and creative productions (writing / drawn) can be combined, free of the 'right' or 'wrong' or of the summative evaluation.

In accordance with the principles enacted in article 5 of Decree-Law no. 7/2001, of January 18th, by the Portuguese Ministry of Education, in the four Scientific-Humanistic Courses of high school, the general training component (that includes Portuguese subject) should contribute to the formation of the personal, social and cultural identity of young people. The Drawing A subject, of specific training in the Visual Arts course, like the other subjects of Artistic Education has, since 2018, the essential learning topics structured in three Domains: Appropriation and Reflection; Interpretation and Communication; Experimentation and Creation. Writing and drawing have in common skills such as expression, perception, figuration and interpretation. Besides that these activities are ways of reacting to the world. The school plays an important role in promoting citizenship practices and humanistic training, like tolerance and non-discrimination. In high school, each school can decide how to implement the Citizenship and Development component. Facing this responsibility, we opted for an operational model based on transversal education and disciplinary and multidisciplinary curriculum management, with the aim of encouraging students to contribute constructively to a fairer and more inclusive global and digital citizenship.

In this context, we sought to create a more informal learning space within the formal classroom space. The project was based on specific Portuguese contents and competences like Literary Education, Reading and Writing, but the context of individual and collective development became interdisciplinary by articulating with Drawing A, and transdisciplinary by also involving citizenship education. In these activities, subjectivity and identity were assumed as essential dimensions of the creative process, conducive to the discovery of wider senses and worldviews, reflected in the intertextuality relations between verbal illustration (written expression) and graphic description (visual expression). We also stimulated the collaborative and creative process, free interpretation, questioning and respect for the plurality of readings. The work produced was not intended for the teacher's judgment, on the contrary, it became motivation for the creative work of a colleague.

How do these writing and illustration proposals contribute to the understanding and fruition of the texts and images produced by peers and to the appreciation of the products and the creative process? How do students welcome peer work as a complement and creative extension of their individual production? In this context we outlined the objectives of this study:

- To stimulate the association between word and image, providing the opportunity for students to create intertextual relationships.
- To promote the articulation between the teaching of visual arts and writing, through a creative and collaborative process.
- To encourage critical thinking by high school students (12th grade), through the production and appreciation of both texts and images for and by peers.

In the 12th grade, both teachers and students tend to focus almost exclusively on studying for the final exams, with some resistance or, at least, a certain distrust towards projects that may distract them from that. More than ever, at this final stage of mandatory education, learning is compartmentalized, teaching is mostly teacher centered, assessment is mostly summative, based on tests, and there is a small number of activities that articulate skills and contents towards the interests of the youth. There is almost no place for informal and formative learning. We consider that the cultural reality of young people, their identity and the subjectivity of their perspective must be integrated into the formal school. This study aims to be a contribution to this paradigm shift.

In this context, visual culture and visuality are theoretical references and important concepts, since the way young people see and relate to what surrounds them can be reflected in the way they write and draw. In this process identity and representation, verbal and visual, are parts of a global and flexible learning. In Portuguese classes, Science students were inspired by the 19th century writer Eça de Queiroz and tried to "take pictures" with a pen and a writing card, transforming observed images into words. In Drawing A classes, the students of the Visual Arts course accepted the challenge of interpreting and illustrating the descriptive texts of their colleagues, transforming words into visual art.

1.1. Main theoretical-conceptual references: Learning mechanisms, Visual culture, Visuality and Intertextuality.

How can visual culture, visuality and intertextuality be essential references in transversal learning processes linked to the experience of writing, observation and reading?

Both text and image convey messages, describe, narrate, communicate ideas, can be read or use metaphors and symbols. The artist René Magritte explored this perspective very well in his work, as Santos (2006, s.p.) points out regarding the Belgian artist, it is "a painting focused on thought, on the analysis of images, language and representation. Magritte dedicated most of his life to this tireless research and, the whole time, asking these two questions: what is the role of the image? What is the role of the word?".

Advertising has long used this powerful combination of senses. This verbal-visual relationship fills everyday life in today's society, in a profusion that is difficult to select and assimilate and in which uncritical consumption predominates. Campos (2010) refers to an ocularcentric society, intensely dependent on the gaze and its technological ramifications to transmit information, scrutinise the world and talk about it. The Spectus Group (2008) considers that the space given to advertising and internet in the classroom is very limited, while its presence on the street is enormous. Advertising continues to be the first model reference for young people and the internet can be a channel for exhibition, distribution, analysis and communication in the classroom. We agree that education has an important role in framing these realities in the classroom, not only through debate and critical reflection, but also through teaching activities that integrate informal learning which takes place outside the classroom. There seems to be no doubt that "in a society increasingly immersed in image and visuality, that it is very important the development of research programs dedicated to the analysis of the relationship between contemporary visual culture and the construction of an idea of youth increasingly global". (Campos, 2010: 135).

Behind the general designations of student, adolescent or teenager, we see identities forming, each of them with a different path, a particular worldview. This project intended to create opportunities for these identities to express themselves, through challenging activities, through words and through drawing. When students are more motivated and confident they can learn better. Innovative proposals, unusual activities in class, which are new for students, can motivate them and facilitate the acquisition of knowledge and skills (Caligiore et al., 2019).

As a reaction to cognitive theories about verbal and non-verbal learning that did not consider the functional connections between these two systems, essential relationships to explain intellectual performance in tasks involving interactions between language and non-verbal knowledge, Paivio (1971) proposed the dual coding theory and according to it each individual processes visual and verbal information individually and at the same time. For this author, the combination of these two dimensions in the learning process is a useful technique to facilitate not only the knowledge acquisition process, but also the retention of information more effectively. This pedagogical model is supported by scientific evidence that has been reiterated since then, in several studies.

According to Clark & Paivio (1991:1) "research demonstrates that concreteness, imagery, and verbal associative processes play major roles in various educational domains: the representation and comprehension of knowledge, learning and memory of school material, effective instruction, individual differences, achievement motivation and test anxiety, and the learning of motor skills"

Along the same line of thought Pinto (2021) presents a synthesis about the review of some recent scientific evidence on the functioning of the brain and learning mechanisms, highlighting some of the factors that facilitate learning, including the association with images (important in later access to long-term memory), learning environments rich in sensory stimuli and novelty as a motivation for acquiring knowledge and skills. The internal representations that are formed and readjusted in our brain about what we understand as "I", "other" and "world" constitute the internal frame of reference (Rogers, 1980).

According to Pinto (2021:2) "learning environments rich in sensory and emotional stimuli can activate the reward learning system. On the other hand, building an IQR [internal frame of reference] confident that skills and abilities can be improved, promotes the allocation of attention to tasks that require more cognitive effort". Seeing and Reading (perceptions and associations). Feeling and Imagining (emotions, appropriations and interpretations). Writing and Drawing (transformations, expressions and reactions). When we read a text, when we write, we create images in our mind.

Mendelsund (2019: 7) raises two essential questions for the reasoning and orientation of our work: "What do we see when we read? (Beyond words on a page.) What do we imagine in our minds?". The portuguese writer Eça de Queiroz had an interesting method of "taking photographs": he regularly made brief descriptive and narrative records not only about the reality he observed in his day-to-day life or about situations he imagined, but also the stories he heard about certain figures of his time. These notes, written on small cards, were meticulously organised in a cabinet (see Figure 1), which he used when he needed "material" to write his works.

If the reading of this author's notes can stimulate the development of a narrative, it is also true that it inevitably provokes a set of stimulating visual sensations. This was the starting point that led us to associate text and image as mutual sources of inspiration.

We can illustrate a text with images and speak or write about what the images convey to us. How does another person imagine what I write? How does another person interpret and write about what I draw? The projection and construction of an authorial identity through the interpretation of the work of another person (Quental, 2009) was one of the proposed challenges.

Consequently, "identity and representation are concepts that allow us to investigate possible connections between the circuits of production, diffusion and consumption of meaning and the mechanisms of identity configuration, namely through systems of visual symbolisation" (Campos, 2010: 117).

The dialogue between a text and an illustration (belonging to different authors) enhances the reading experience and critical thinking, not only for "the interlocutors", but also for "those who attend this conversation".

As Quental (2009: s.p.) sustains: "illustration as an expression, fulfilling the purpose of communicating visually, is revealing of a specific way of process and thought. And because this mode is constituted from the implicit meaning (of what is not said), requiring the cognitive and affective participation of the illustrator to manifest itself, it reveals marks of subjectivity and poetics that bear original narrative, graphic and plastic solutions. This transmutation between verbal and visual languages is impregnated with experiences, memories and knowledge; of everything, in short, that is perceived and felt by the body. That is why it is understood that it configures, necessarily, something new, since two beings are never organically alike".



Figure 1. Eça de Queiroz' cabinet and two examples of the writer's handwritten notes (Photo credits: courtesy of Fundação Eça de Queiroz).

The ways of seeing (Chaplin, 1994; Sauvageot, 1994; Berger, 1999) can limit, but also stimulate the written and the visual representations that we make of what exists around us. Our subjective look is guided by our biographical and cultural journey, but when we face a challenge there is a (re)positioning of the way of looking and a critical exercise before which it is not possible to be indifferent. The concept of Visuality implies not only this redirection of the gaze as a cultural practice, but also a critical perspective on the impact that this gaze has on the observer (Hernández, 2015; Marques & Campos, 2017). We reinforce Campos' statement (2010) about the relevance of visibility as a component of social life, insofar as the image as a vehicle of communication and representation of the world is inherent in the history of humanity.

This project also tried to stimulate the ability to transcribe what is observed, to draw what one imagines when reading a text and to transcribe what is interpreted from a drawing. In this partnership between two school groups, there is a work of appropriation and co-creation from which semantic images and visual metaphors emerged, the result of the dialogue between texts and images. In 2010, Campos defended the importance of image and visual imagery as a strategic resource in the context of contemporary society, in the construction of meaning and culture.

Texts and images, as representations (illustrations), are important for the identity construction of our young people because as Campos observes (2010: 119): "personal and cultural identity is permanently fed by meanings coming from texts and agents that support a delimited ontological order, placing the individual and the groups in society. It is in this circuit that both identity and representation are mutually entangled and metamorphosed."

The concepts are also gaining new dimensions and new contexts. The dialogue of Visual Culture with other disciplines, from the most classical to the most modern, has been developing (Hernández, 1997; Freedman, 2003a and 2003b; Charréu, 2015; Salbego & Charréu, 2017), within the scope of new investigative practices and innovative and transversal didactics. Since the late 1960s (Julia Kristeva), the concept of intertextuality (dialogue between texts) has been expanded, extending to other contexts, other languages and forms of communication: films, works of art, music, advertising, among others (Waltty, 2009). According to the DGIDC Terminological Dictionary for online consultation (<https://apoioescolas.dge.mec.pt/>), intertextuality can take on various forms, from allusion and quotation to creative imitation, paraphrase, parody and plagiarism. The hypotext of a literary text can be a non-literary, non-verbal text (a pictorial text, for example). This relationship can be designated as a manifestation of interartistic intertextuality.

Duncum (2015) considered the way an image relates to many others, both in the past and in the present, referring to a rhizomatic structure, which sustains these visual and sense associations, in which transverse issues and sensations generally appear, such as social concerns, certainties, fears, hopes and desires.

When an author takes up a work (or part of it) and recreates it with a certain communicative intention, using the same or another language, what he seeks, in addition to provocation, homage or criticism, is to establish a relationship of complicity with the reader, providing a playful experience, which is also creative. Similar to the didactic-pedagogical project presented in Sarzedas (2021), developed at the same school group, this study also intended to provide students with the possibility of being authors and builders of meaning relationships between images created in the classroom and literary texts, through sharing their experiences and learning (formal and informal).

As Mendelsund (2019: 207) testifies: "These images that we "see" when we read are personal: what we do not see is what the author imagined when he wrote a given book. In other words: all narratives are made to be transposed: translated by imagination. Translated by association. They are ours". Using the visual metaphor of Deleuze and Guattari (1995), instead of the arboreal, hierarchical, vertical and oriented model, predominant in traditional, expository teaching and in which the student has a more passive role as a listener, we think that the rhizomatic model, more horizontal and transversal, is closer to the reality of young people, who browse the internet, research and learn in a more intuitive and not necessarily hierarchical way, in order to establish the connections and networks of meaning that they immediately need. According to these authors, these knowledge construction networks that are created and developed through multiple associations are closer to the structure of roots in the horizontal rhizome of the grass that covers a terrain, than to the vertical structure of the root of a tree.

1.2. The role of social networks in the project

Like a growing number of cultural institutions all over the world, the Eça de Queiroz Foundation also has an active presence on social networks, (<https://www.facebook.com/FundacaoEcaDeQueiroz>) currently with around 16 thousand followers, a significant number taking into account the cultural and literary scope of the Foundation at a time when interests, particularly those of young people, are more related to products in the field of music, fashion or sports. Its educational service (<https://feq.pt/servico-educativo/>) provided us with information on accessing the "real" Foundation at Quinta de Tormes, formerly belonging to the writer, located in the north of Portugal in Trás-os-Montes, not far from the protected landscape of the wine region. Fortunately the handwritten notes of the writer Eça de Queiroz are nowadays available for school use through the current document scanning process being this way a huge advantage for the students compared to the time when only duly authorised researchers would have this privileged access.

According to data for 2022, from the Statista platform (www.statista.com/), among the most used social networks in the world, Facebook ranks first, followed by YouTube and WhatsApp. These data corroborate the trend already reported in Portugal by the 2019 report by We are social – Hootsuite (<https://datareportal.com/reports/digital-2019-portugal>).

The judicious inclusion of social networks used in the school context promotes a critical use of these digital platforms, which can be seen as a valid and dynamic resource in the collection and sharing of quality information. As Gonçalves (2015) points out, it is important for students to be aware of their digital footprint and the impact it may have, both personally and professionally.

Some research on the impact of social networks in educational context has shown some favourable results for the inclusion of these platforms in school activities in different subjects. Rosa (2015) concluded that the use of technologies in the process of teaching and learning Mathematics contributes to the construction of students' knowledge, enabling innovation and diversification of methodological processes. Coelho (2017) highlights as the main result of his study the importance of Facebook and Instagram in the teaching of Drawing and Arts in general, not only as an alternative means of accessing works by artists (compared to traditional educational resources), being this one of the added value of the internet, but also as an incentive to a culture of sharing and criticising the work of peers. Rejecting or ignoring the advantages of accessing social networks in a school context (formal or informal) reflects a misfit view of the current pedagogical relationship, the social dimension of teaching, the education for citizenship, the acquisition and development of students' skills for the future digital, plural contact with other socio-cultural contexts and the development of their critical sense. Paixão (2018) attests that the knowledge of how high school students use social networks has an impact on the development of the teaching and learning process. This author also emphasises the transforming process that has been observed in the adaptation of teaching practice to new technologies and also in the role of school libraries, currently more and better equipped and adapted to the digital world. Subscribing to the results of these investigations, we defend an inclusive school but also a school included in local, national and world society.

2. Framework and development of the project, methodologies and main artistic results

The study was carried out within the framework of the Master's Degree in Artistic Education at the Escola Superior de Educação de Lisboa and was based on a mixed methodology, from the perspective of Research-Action.

According to a questionnaire applied to 37 students, with 9 items to classify from 1 (minimum) to 5 (maximum), most of the students considered that these activities contributed to: (1st) create opportunities for

students to develop the ability to read images and texts, to develop the creative process, autonomy, critical thinking and aesthetic sense (average: 4.6); (2nd) stimulate the reading of images and texts (establishing intertextual relations) as a starting point for the creative process (average: 4.5); (3rd) promote an active and responsible citizenship, valuing the students' work, attitudes of respect, cooperation and tolerance (average of answers: 4.4). An increase in confidence and motivation are stimulating gains for future tasks that are more demanding from a cognitive or technical point of view.

The empirical dimension that gave rise to this text was then based on a project work that was elaborated within the subjects of Portuguese and Drawing A for students of two classes of the 12th grade, one from the Course of Sciences and Technology (CST) and another from the Visual Arts Course, both from the Lourinhã High School, located in the West region of Portugal, between January and May 2019. We proposed two individual activities, two collaborative activities and two meetings to share the works produced by the students. The intention was to encourage CST students to read some handwritten notes by Eça de Queiroz and to produce small descriptive/narrative texts that would constitute stimuli for the creation of images (through free and individual interpretation of their texts) by students of the Arts class. In a second moment, it would be the Arts students to produce images that would be stimuli for the production of lyrical texts by the Science students.

The investigation thus followed these guidelines and sought to answer the following questions:

- Can artistic productions of a visual nature created by students from a text help them to improve their skills and, consequently, develop a greater taste for reading/writing and for artistic production?
- Can the writing process based on an image stimulate the students' aesthetic sense, critical thinking and appreciation of artistic production?
- Can the illustration process encourage students to persist in the process of re-reading a text written by a colleague, and also of the aesthetic sense and of critical thinking?
- What is the impact on students of the roles assumed in this project: observer, creator (designer/writer), reader?

In this context, the aim was to understand how these two school groups from different domains (Science and Arts) would react to proposals for writing and illustration, according to the sequence of activities shown in Table 1:

Table 1. Sequential description of practical activities [The development of activities is top-down]

	Activities (January-May 2019)	Intervening actors
1	Presentation of the project to the two classes by the teachers of Portuguese and Drawing A.	Portuguese and Drawing Teachers
2	Production of narrative-descriptive texts, through observation (individual task)	Students in the Portuguese class (Science Course)
3	Production of images from the texts of the Science class (individual task)	Drawing class students A (Arts Course)
4	1st Meeting to share the work done (texts and visual illustrations)	All students and teachers
5	Production of freestyle images (individual task).	Drawing class students A (Arts Course)
6	Production of poetic texts from the images of the Arts class (individual task)	Students in the Portuguese class (Science Course)
7	2nd Meeting to share work carried out with both classes (visual illustrations and poems).	All students and teachers
8	Filling in a questionnaire to evaluate the activity (individual task).	All the students
9	Disclosure of results	All students and teachers

Strategies and work methods based on cooperative and collaborative learning were adopted. As final products we had in the first moment, the descriptive texts and respective illustrations and in the second moment the images and corresponding poetic texts.

The project had several phases and began in January 2019. In a Portuguese class of the Science and Technology Course, the mobile-archive by Eça de Queiroz and examples of his handwritten notes were presented. (Figure 1)

This was followed by a writing proposal (Activity 2 in Table 1) in the Portuguese class within the scope of the study of the descriptive-narrative text. The students should select a landscape, a person, an action or an object to observe and write some notes, taking inspiration from Eça de Queiroz' notes. The rewriting of these notes was encouraged, through peer review, within the class group.

These handwritten descriptions were then given to the students of the Drawing class, so that they could illustrate the texts (Activity 3 of Table 1).

After this first round, the first meeting of both groups took place (Activity 4) to share the work. In the classroom, with the chairs arranged in a circle, each Arts student showed his/her illustration so that the colleagues could discover which drawing would represent each text.



Figures 2 and 3. Two artistic productions by students of the Drawing class that inspired the two poems above: "The Seven Headed Beast", Figure 2, and "Pegasus, the rebel", Figure 3. (Article authors' photos)

The Project continued its course with a second illustration challenge (Activity 5). In the Drawing subject, the students were invited to make illustrations with a free theme and style. They knew, in advance, that their drawings would be a motivation for their colleagues from the other class to carry out a writing exercise later. These images were then given to the students of the Science course so that they could generate writing (Activity 6). This way, poems were written, within the scope of the Portuguese classes, from which we have selected the two examples below (corresponding to Figures 2 and 3). The facilities of digital technologies were explored, as the institutional email Drive was used so that students could place their poems in a common document. So, everyone had access to what had been produced by their classmates and could make constructive comments, in order to improve the rewriting process.

The Seven Headed Beast

Leave me close to Lerna,
Cause Hercules' sword is no more.

Am I strong enough?

Let me be Hero of King Eurystheus,
corrupt king and killer of my family.

In a swamp of deadly poison where from one two are born.
I, Hercules, who beat the Lion, the Boar and the Bull.

Am I strong enough?

With a firebrand seven I will defeat.
But Megara, disposed in the reign of dead.

Queen of my kingdom, startled by a hydra,
Dead and finished,
As the other eleven...

Pegasus, the rebel

Pegasus, the rebel, rides freely:
Rides as insane
In the wideness of the sky, burning,
Keeps the quietness of each moment;
Rides, making his pace to compromise
The eternity of his suffering.

Riding up,
Slithering down,
Riding up again,
Just to reach the fortune
of feeling the quietness
Pégaso before Pegasus,
And sweat before shining.
Pure as a desert.
Perfectly naked and exposed.

The second meeting (activity 7) between the two classes to share the work took place in an inner courtyard of the school. The two classes got together and formed small groups for the presentation of the works. The Science students read and offered their poems to their Arts colleagues. This informal environment was conducive to dialogue between writers and designers, regarding artistic and literary options, the plurality of interpretations, expectations and reactions to the works.

Regarding the evaluation of the project, each teacher distributed a questionnaire to her students so that they could classify the level of fulfillment of the outlined objectives and the impact of the project on their personal training. Students' comments, expressed spontaneously about these activities were also heard and discussed.

The project was publicised through an exhibition of works at the main school of the Lourinhã School Group to share with the school community (Figure 4).

Photographs of this event were sent to the Eça de Queiroz Foundation and this institution published them on its Facebook page (<https://www.facebook.com/FundacaoEcaDeQueiroz/>), contributing to a wider dissemination of this project through this social network.



Figure 4. Poster allusive to the exhibition of the works of the two classes, at school, by the teacher of Drawing A subject, Ana Sanches. (Article authors' photos)

During the activity it was also necessary to deconstruct some prejudices regarding collaborative activities between these two groups of different courses (Science & Technology and Visual Arts). Using an interdisciplinary approach to train transversal and specific competences raised initially some suspicion as to the legitimacy of implementing this didactic-pedagogical dynamic. In this sense, the two meetings between the two classes, which complemented the dialogues between writing and visual art, were fundamental to give meaning and credibility to the transversal learning and to what the students had produced.

Some students did not initially recognise their own text or their own image in the written or artistic interpretation of a colleague and were surprised by the plurality of meanings they had not thought of during their creative process. Through dialogue with their colleagues, they understood that their work had a subjective dimension that went beyond their worldview, from the moment it was seen through different eyes, with other experiences and references. The visual and semantic metaphor was also explored by both groups. For example: a student described his motorcycle as a “female character”, without making it clear that it was a vehicle. The resulting visual translation was a drawing that represents a relationship between two people (Figures 5 and 6). The author of the text expressed his surprise and appreciated the solution found by his colleague to give shape to her reading of the text.

Seu brilho de preto baço fog com que, embora tímida, não fosse desmerecida.
 Cantem-se imponente com um olhar que transmite uma confiança e uma segurança tais que se de a vez aperta fixa-la, para que expresse o seu canto metálico e mecânico mas regular, que mais parece um suspiro.
 Ela entantoe, mesmo depois de já estar a suspirar, como quem foi provocada e está determinada a atuar, se quando me agarro ao seu dorso e lhe aperto o punho é que o seu suspiro se torna num rugido quase ensurdecedor, nesse mesmo momento demonstra a sua audácia e confiança, pronta a prova a minha coragem.
 Assim, encaixada em seu canto metálico, geométrico e frio, estamos ligados como um só, estou confortável mas não segura, lixe mas feroz a ela em transe mas mais viva e feroz que nunca.



Figures 5 and 6. Descriptive text by a student from the Science group (Figure 5) and visual interpretation of this text by an Arts student (Figure 6). (Article authors' photos)

According to our pedagogical experience, a further expansion of the project could be supported by the eTwinning platform (an Action of the Erasmus + Program of the European Union: <https://school-education.ec.europa.eu/>). This would be the most appropriate digital resource for these activities to acquire a more global, multilingual and multicultural dimension, as it enables the development of transdisciplinary projects with other European schools, using the Internet and Information and Communication Technologies. Through this platform, which promotes the creation of collaborative work networks, teachers and students can contact their peers and form eTwinning groups (virtual spaces for meeting and discussing specific subjects and topics or other areas of interest among eTwinners).

3. Conclusions

Regarding the results obtained, it was found that, despite some initial mistrust about this collaborative project of writing, reading and illustration (expressed, especially, by the class of the Science and Technology Course), proposed to students of the 12th grade, within the scope of the Portuguese and Drawing A subjects, there was a 100% adherence of the students and a growing motivation, mainly after the first meeting to share the works between the two classes.

According to the questionnaire applied to the students, most of them considered that these activities contributed to: (1st) create opportunities for students to develop the ability to read images and texts, to developing the creative process, autonomy, critical thinking and aesthetic sense; (2nd) stimulate the reading of images and texts (establishing intertextual relations) as a starting point for the creative process; (3rd) promote an active and responsible citizenship, valuing students' work, attitudes of respect, cooperation and tolerance.

It was intended to make a contribution to (re)educate the look, by combining writing and the visual arts, through a conscious dialogue between text and image, in order to provoke interpretations about what was observed/written/illustrated and discussions between observers/writers/designers. In this creative process which was highly valued especially during the sharing meetings, experiences and identity references expressed through words and images became more visible.

There seems to be significant evidence of a convergence of shared conclusions among neuroscientists, visual artists, pedagogues, and other researchers regarding the advantages of using imagery in the learning process.

The students confirmed that the motivation to create their text/illustration led them to repeatedly read, observe and appreciate the details of their peers' work. The process of capturing, interpreting and selecting information was individual, but based on a creative partnership (production was arising from or for another person). The students recognized a strong relationship between the works produced, when they were placed side by side. The two moments for sharing the work, despite being conditioned by the school timetable, exceeded expectations and constituted unique and aggregating moments of fruition, interpretation, experimentation and inclusion. Expectations regarding the project's results were exceeded, not only because of the commitment of the students, the quality of the work presented, but also the dialogue that was established in these sharing and discussion sessions about the texts, illustrations and the creative process. We consider that this project constituted an important contribution to stimulate the poetic and artistic sensibility of Science students, generally less motivated for these areas in the High School of Lourinhã.

The appropriation of what is seen (and what is implied, but not seen), what is felt and what is written, drawn (or suggested), filtered and enriched by identity and subjectivity, leads to creation, to (re)discovery of the authorial text, represented in the drawing of another person and the (re)discovery of the authorial image, represented in the words of another person.

References

- Berger, J. (1999). *Modos de Ver*. Edições 70.
- Caligiore, D., et al. (2019). The super-learning hypothesis: Integrating learning processes across cortex, cerebellum and basal ganglia. *Neuroscience & Biobehavioral Reviews*, 100, 19-34. DOI: <https://doi.org/10.1016/j.neubiorev.2019.02.008>
- Campos, R. (2010). Juventude e visualidade no mundo contemporâneo: uma reflexão em torno da imagem nas culturas juvenis. *Sociologia, Problemas e Práticas*, n.º 63, 113-137.
- Chaplin, E. (1994). *Sociology and Visual Representation*. Routledge.
- Charréu, L. (2015). Cultura Visual: Rupturas con Inercias e Ignorancias Curriculares. In Martins et al. (Orgs.), *Educación de la Cultura Visual: Conceptos e contextos* (pp. 174-188). IENBLA/ Universidad de la Republica.
- Clark, J. M., & Paivio, A. (1991). Dual coding theory and education. *Educational psychology review*, 3, 149-210.
- Coelho, N. (2017). O impacto do uso das Redes Sociais no ensino de Desenho [unpublished master dissertation]. Universidade Lusófona de Humanidades e Tecnologias.
- Deleuze, G. e Guattari, F. (1987). *A Thousand Plateaus*. University of Minnesota Press.
- Freedman, K. (2003a). *Teaching visual culture, curriculum, aesthetics and the social life of art*. Teachers College Press.
- Freedman, K. (2003b). The importance of Student Artistic Production to Teaching Visual Culture. *Art Education*, 56(2), 38-43.

- Gonçalves, A. (2015). A utilização das Redes Sociais pelos jovens e o seu impacto na empregabilidade local [unpublished master dissertation]. Universidade Católica Portuguesa.
- Spectus, G. (2008). Análisis creativo de la publicidad en los entornos virtuales. *Comunicar*, 16(31). DOI: <https://doi.org/10.3916/c31-2008-03-075>
- Hernández, F. (1997). *Educación y cultura Visual*. Publicaciones MCEP.
- Hernández, F. (2015). La Cultura Visual como invitación a la deslocalización de la mirada y reposicionamiento del sujeto. In Martins et al. (Orgs.). *Educación de la Cultura Visual: conceptos e contextos* (pp. 75-92). IENBLA/ Universidad de la Republica.
- Marques, S. & Campos, R. (2017). Políticas de visualidade, práticas visuais e a construção de espaços de imaginação. *Cadernos de Arte e Antropologia*, 6(2), 5-10. DOI: <https://doi.org/10.4000/cadernosaa.1250>
- Mendelsund, P. (2019). *O que vemos quando lemos*. Elsinore.
- Paivio, A. (1971). *Imagery & verbal processes*. Holt, Reinhart & Winston, Inc.
- Paivio, A. (2014). Intelligence, dual coding theory, and the brain. *Intelligence*, 47, 141-158. DOI: <https://doi.org/10.1016/j.intell.2014.09.002>
- Paixão, J. (2018). O uso das redes sociais nas práticas de literacia da informação : um estudo com alunos do ensino secundário [unpublished master dissertation]. Universidade Aberta.
- Pinto, P. (2021). Funcionamento do cérebro: aprendizagem e mudança. *Revista da UI_IPSantarém*, 9(2), 1-8. DOI: <https://doi.org/10.25746/ruiips.v9.i2.26405>
- Quental, J. (2009). *A ilustração enquanto processo e pensamento. A autoria e interpretação* [unpublished PhD dissertation]. Universidade de Aveiro.
- Rogers, C. (1980). *A way of Being*. Houghton Mifflin.
- Rosa, P. (2015). Redes sociais no ensino de Matemática: a utilização do Facebook com alunos do nono ano do ensino fundamental [unpublished master dissertation]. Universidade do Minho.
- Salbego, J. e Charréu, L. (2017). Educação e práticas contemporâneas de visualidade: o que significa, afinal, ensinar pela Cultura Visual. *Perspectiva*, 35(4), 1196-1214.
- Sant'Anna, T. (Org.) (2016). *Imagem, cultura visual e poder: incursões foucaultianas e deleuzeanas*. Kelps.
- Santos, C. J. (2006). *A ordem secreta das coisas: René Magritte e o jogo do visível* [unpublished master dissertation]. Universidade Federal de Minas Gerais.
- Sarzedas, A. e Charréu, L. (2021). Cultura visual, práticas artísticas e intertextualidade: Uma proposta transdisciplinar envolvendo atividades expressivas e colaborativas no ensino da disciplina de Português. In *A educação artística atrás das máscaras, no IX Congresso Internacional Matéria-Prima* (pp. 190-203). CIEBA – Centro de Investigação e Estudos em Belas-Artes, Faculdade de Belas-Artes, Universidade de Lisboa e SNBA – Sociedade Nacional de Belas Artes.
- Sauvageot, A. (1994). *Voirs et Savoirs: Esquisse d'Une Sociologie du Regard*. Presses Universitaires de France.
- Walty, I.: s.v. "Intertextualidade", E-Dicionário de Termos Literários (EDTL), coord. de Carlos Ceia. ISBN: 989-20-0088-9, <<http://www.edtl.com.pt>>, consultado em 06-02-2023.