Construction of Collective Imagetic Narratives:
Challenges in Teaching and Learning Processes within the Digital Culture

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Abstract: This paper approaches the way new technologies can potentialize a critical innovating view on teaching-learning processes, considering the aesthetics produced within the digital culture. The work was based upon an interdisciplinary multimedia project developed by seventh graders attending a private elementary school. The students have used digital photographs and computing as technologies to produce the collective imagetic narrative, encouraging other cognitive processes of perception and image construction, transgressing the customary practices of the interfaces themselves. It is undeniable that new technologies promote changes overcoming their simple use; however, we have to ask ourselves where these changes affect the teaching-learning processes and the mutations they may cause.

Keywords: imagetic narratives, new technologies, art-education, digital culture.
Introduction

This paper discusses image construction in teaching-learning processes within the digital culture, based upon an interdisciplinary project entitled Além do Olhar (Beyond the Eyes), which was developed along 2006 and 2007 school years, in a seventh grade class of a private school, in the school subjects: Artistic Education, Portuguese Language, Thinking Education, Religious Education, English Language and Science. The teachers of such subjects were mobilized to design a project based upon the need and urgency of addressing issues related to ethics, values and citizenship. Digital photography and Computing were used as collective imagetic narrative technologies in Artistic Education, making the students work in their manipulation, edition and mounting by using Firework and Photo Story 3 (freeware) software programs. It was intended to construct a reflexive theoretical and practical knowledge, propitiating co-authoring processes of significant collective narratives within the digital culture against the alienating and massive processes caused by the excessive production of non-sense images.

Project Motivation

The group of teachers involved in the project has chosen ethics, values and citizenship-related issues, which would trigger a critical reflection on Marcelo Carneiro's book "Antes que o mundo acabe" (Before the World Ends Up), worked in the Portuguese language subject, approaching the act of viewing and the imagetic dialog from photography. Thus, the project leading string was designed based upon the problemizing of daily ethics on the aesthetic and critical act of viewing when using digital photography. Thinking about the act of viewing through photography requires a critical attitude, the perception of details, singular cutouts valorizing day-by-day. The photographic viewing inquires day-by-day, both ethical and aesthetically.

Teachers have also decided that such approach should be interdisciplinary and based upon projects, as they believe educational practices become efficient and
qualitative within a participating space in research communities, according to a reflexive paradigm (Lipmam, 2001, pp.28-29). The project interdisciplinary work has allowed the students to research problems in the different school subjects, while arguing the stated truths; to produce knowledge, both in the final results and the processes changing during the practice itself; and to participate of the research as co-authors. We believe knowledge becomes effective in reflexive practices about day-by-day inside and outside the school.

Any education really committed to citizenship needs to create conditions to develop the ability of efficiently use the language to satisfy individual needs – which may be related to daily effective actions, to information transmission and search, to the exercise of reflecting. (BRASIL, 1996).

Within this perspective of allowing moments of reflection, living, sensitiveness and knowledge construction, the project was divided into two different stages: reading of the book *Antes que o Mundo Acabe*, focusing the photographic dialogue, in Portuguese Language subject; watching of the film *O poder da Visão (The Power of Viewing)* and debating on it, in Thinking Education and Religion subjects; theoretical study and workshop on digital photography, including field work, in Artistic Education; digitalization, graphic production, edition and multimedia mounting of the photographs, in the Computing lab together with the Artistic Education subject; daily habits, in English Language; and physiologic mechanisms of viewing related to the photographic process, in Science subject. The stages were sequential in some moments, and simultaneous, in others, always referring to each other in the project construction. Currently, the project is being developed under the focus of Artistic Education, as it is necessary not only to report the facts, but also to turn its contribution significant to computing in Education, as it has linked Arts, computing and digital culture.

In the Artistic Education subject, a mediating approach among ethics, aesthetics and technology was used, between what we see and what is absent before our eyes, but needs to be seen, or better, needs to become visible. The project shows knowledge construction results from an ethical-aesthetical elaboration on life, and, nowadays, we cannot ignore the new interfaces of knowledge within this elaboration, such as digital technology. We could even say that it was a challenge for the teachers in the project to
work with a technology which is closer to the students than to themselves, in this case, digital photography and the computer. Two hundred and twenty-three students were involved in the project. In general, all of them belong to medium and high-income classes, being used to photograph with cell phones and digital cameras, and to navigate in the Internet, producing and consuming images with no critical or aesthetical sense. In such scenario, Art performs an extremely important role in knowledge construction within the digital culture.

We believe that Art, associated to the new technologies, proposes new educational practices and different ways of living. Both turn us present, creating other realities from their own self-creation processes. Art is a knowledge experience, and, in this sense, an ethical practice, as it offers to the human beings what is theirs by right, their own thought; and also an aesthetical construction of the world, because it makes viewing what still has no visibility, attributing sense to new invented compositions. Through Art, the technological day-by-day can be decelerated, producing other time-space dimensions. The aesthetical experience comes from the way I open myself to that which looks at me. The students listened to music, watched images, built compositions, and their own images, sounds, and compositions served as mirrors through which they contacted with their multiplicities, with that which was untouched although present. Image is something I will know, but also something which will make me (un)know, i.e., a perturbation, an imperception of perception.

We think in educational practices connected to daily experiences, both in the thematic and technological levels, as it is believed that wherever there is an ethics of existence, there is also an aesthetics of the experience implied in daily actions, encouraging to look through the cutouts of the digital photographic camera. Focusing the eyes on an immediatist frame of the current world where our students are inserted. We believe that joining the historically constructed knowledge to a view of the world elaborated by the student from the experiences and situations provided within the school environment could aid to perceive the need all of us have of qualifying our view of the world, of the others, and, at the end, of ourselves. By speaking about the view, we also give to our students the singularity of each one's perception about the day-by-day. As Fernando Hernandez states, “[…] images are part of visual contexts (historical, social,
cultural, etc.), which may affect the generalization of the aesthetical qualities the perceptive view favors”. (Hernández, 2000, pg. 46).

About the technologies employed, we consider it important to argue the way Information and Communication Technologies (ICTs) are promoting (or not) displacements in the way of seeing, in the social practices and educational processes. It is undeniable that ICTs are changing the social and educational relationships, promoting changes that exceed the simple use of technology; however, we have to ask ourselves how these changes affect the cognitive processes and which are the mutations this new digital interface causes. The digital world proposes new aesthetical forms, new ways of living within the space-time, new conceptions of the reality.

By using digital photography and the computer, we intend to encourage other cognitive processes of perception and image construction, to cause unbalancing situations, guiding to knowledge construction and not only to information access. We need to consider what our students express, and also the way they express it, as both are indissociable. In this project, we have tried the students to invert their experiences with the digital media: the digital technology as a way of aesthetically potentializing the view on the day-by-day, instead of blinding it by the compulsive production of images we witness in the contemporaneity. We believe art-education cannot disregard its role in knowledge construction within the digital media. As Guattari states, “no field of opinion, thought, image, affection, narrativity, can, from now on, pretend to escape to the invasive influence of the "computing-aid", databases, telematics, etc.” (1993, pg. 177).

Briefly, we can say that the main objective of the interdisciplinary project “Além do Olhar” is problemizing how the use of new digital technologies (digital photography and computing) may potentialize this new critical and innovating view, considering the aesthetics produced in the digital culture. The dialogue between subjects has fostered discussions about attitudes of respect, solidarity, preserve, ecology, violence, pollution, and discrimination, making the students express their positions while watching the closer reality, and be challenged to creatively construct an own narrative through digital technological media.
The Use of Digital Photography and Computing

Digital photography and computing were used because it was noted that the possibilities of these technologies allow the student to have a better focus on the creative process of visual thinking rather than manual skills. New technologies also offer the possibility of reviewing some concepts on the artistic production. As Pierre Lévy states,

“[…] in the new creation regime, the artist does not perform the composition, the writing or the drawing of a message, but conceives a generating system of works […] The artwork is not a cascade of interpretations anymore, but a network of interactive operations within the mesh of the contemporaneous universe” (1998, pg. 50; 54)

While producing the works, computing was evidenced not as a mere resource, but it implemented particularities related to it. Technique becomes the means language itself. Working in the computer is not just using the images and data available from it, but changing the way of doing and thinking based upon the use of its resources. The constructed knowledge is collective and multiple; concepts are polysemic instead of universal; sense production processes operate through the interpretative singularities, producing a dialogic relationship when the object meets the other, motivating the students to argue, and causing important cognitive processes of reflection and justification.

Beginning of the Art Project

The choice of new digital technologies to work Arts was motivated by a book project using photography as a narrative way, as previously stated; by a curricular choice contemplating the use of new technologies and, specially, because of the demand of the students, who are used to record moments with digital cameras and/or cell phones in a daily basis. In this sense, we have assessed the need and urgency of promoting works leading to problemize the use of technologies itself, reflecting on which is the aesthetics being produced and which is the critical use one have within the digital culture.
We have intended to work in such a way that the usual practice would be transgressed, inverting the notions of time and use. Students experience communication based upon accelerating and discarding, that is, the production of numberless images which may be discarded with a simple deleting gesture. We propose to insert time in the produced images: the students have watched, analyzed and decoded the same images during six months. We have also shown that the use would occur in the sense of giving and seeing, of decelerating the view of the day-by-day, instead of increasing its pollution with non-sense images.

We have chosen two different focuses within the Art History: artists showing a different view, such as Picasso and Escher; Brazilian photographers, such as Sebastião Salgado, Vick Nuniz, Artur Omar and Araquém Alcântara, and photographers using particularities of the digital media.

**Development**

**Digital Photography Workshops**

Digital photography was theoretically approached as a visual language during the Art classes, and practically, in a workshop leaded by a professional of the field, photographer Gabriel Schmidt. The photography workshop was planned by the Art teachers, in partnership with a photographer, when relevant aspects which should be considered as learning elements were discussed, such as: a report on the history of Photography interlaced with the research on how to record what we see, the first appearance of the photographic camera, highlighting images of the world, handling of digital photographic cameras, implications of movement on the photo, and, specially, contemporaneous digital photography proposals using the Internet and the cell phone. A handout including standards and tips about digital photographic cameras was used. Four class periods were used per group of students to develop all the workshop activities.

**Field Work**
After ending the workshop activities, the students have developed a field work, where they have experienced the learning construction, based upon the previous knowledge (theoretical and practical), trying to identify and resignify moments, attitudes or situations where the main topic – Ethics – was the main focus of their photos. This experience was developed during one week. Each student should take numberless photos and choose at least ten of them to be sent for the photographer's appraisal. After taking the photos, the material should be sent to the school computing lab, to be attached to the students’ portfolios.

The chosen topics were violence, visual and environmental pollution, disabled persons, social responsibility, drugs, friendship, solidarity and others, according to the criteria of each couple. Many students have reported the participation of their families and friends when photographing the desired topic. The students have also explained the challenges they had experienced in the field work, such as: topic selecting (watch their reality in a conscious way), overcoming the shyness of interacting with the involved community, taking numberless photos exploring the knowledge about photographic language and that of the digital camera; the pleasure of photographing other people, among others. They have taken profit of the advantages of the digital camera, its easy handling and possibility of taking high number of photos.

**Photo Editing**

We think the digital technologies can operate as a way of deconstructing the first view, adding a new narrative discourse and promoting a special cognition way. In this moment, we intend to detail the comments on the stage developed at the computing lab. The photos taken during the field work were selected and classified by each couple according to the gestuality identifying the topic. The selected photos were digitalized by the students in the computing lab and stored in the computer.

The School has four computing labs; the 7th grade lab (about 240 students – 40 students per group) has 22 computers connected to the Internet at 865.70 kbytes/second. The students also have a bank of previously-captured images available on the network, within the context of the activities they will develop. Music and sound banks are also
available. For the current project, each couple has brought a music they intended to add as a soundtrack, which was inserted in the sound bank through the Musicmatch Jukebox software.

In the image editing stage, we have chosen to work with Macromedia Firework software, because it is a drawing program based upon vectors allowing the combination of filters and texts in an agile way and reduced size, which is very important for mounting and audiovisual speed. As it was a software program almost unknown by the seven graders, the tools to create and modify the images in the program were introduced in the first class.

The projects developed in the computing lab are jointly prepared with the technical responsible person and the subject teachers, considering it is essential to identify the strength and possibilities of each software program, as their use would directly affect the student’s development. We believe the educational process with digital technologies shall consider the dynamic in social and communicational interactions; thus, we do not want just to work with modern tools to follow the vertiginous growth of educational technologies, but to use technology to provide the youngsters with new cognitive development possibilities, promoting cooperation, as they normally work in couples, and need to compare opinions, learning based upon audiovisual researches. For this we have informed about numberless sources and the resource sharing.

As an example, we herein depict the work developed by one of the couples, who have developed the activities based upon photos of disabled people. The couple has investigated where to found people with multiple disabilities and, together with their parents, have gone to a Brazilian university (Pontifícia Universidade Católica do Rio Grande do Sul – PUCRS), where a group of disabled people develops an integration project through sports. In that place, they have recorded all the activities (about 120 photos), from the warming-up through the sport activity actual development, interviewing the participants, and verifying their needs and the problems the daily city life brings to them. Then, they took the photos to the computing lab to be digitalized.
The time has come to work on these images and show the problems of those people. The students have chosen one photo to work on the Fireworks graphic editor, always establishing the central image as the work focus. This image has brought a special situation, and, again, they have gone for a new photo identifying one of the main problems of multiple disabled people: displacement. Back to the lab, and after choosing another photo (a street with a traffic lane) the couple has managed to mount an image really portraying the displacement problems in a city which is not prepared to integrate the disabled people – a frequent case in most Brazilian cities (Figure 1).

Figure 1. Photos and students mounting.

**Narrative Mounting**

The next stage was developed using Photo Story 3 (free software), where students should construct their own narrative about the topic, using: images previously mounted; ten photos (selected from the field work) and their editions; phrases, thoughts, worked on the topic in the Portuguese Language subject; soundtrack or, otherwise, other images from the Internet or the image bank of the lab, for the new mountings. The final work communicated a multimedia audiovisual discourse translating all the argumentations on the situation they have experienced. Photographing, manipulating the images and constructing their own narrative have provided the students with a concrete authorship experience.
We have used the Microsoft Photo Story 3 software, because it is a freeware, including resources which allow creating slideshows with the digitalized images, offering the possibility to edit a story. The final product of the creation includes videos ranging from 1 to 2 minutes, and 2,500 Kbytes size. Thus, in the Fireworks software, the aim was interfering, modifying and resignifying the photo. The presentation, remix and authorial narrative were performed in Photo Story. Aesthetics was redimensioned taking into account other characteristics, based upon the multimedia supports, aggregating image, sound and text. The educational practice prioritizing certain language expressions, such as verbal (reading and writing), not considering other ones, such as the image and sound (also related to the field of Art) is displaced. The students report they have accessed this program at home and were using it for other extracurricular purposes.

The teacher-student relationship was mediated – valuing the differences and enlarging the multiple points of view. A cooperative education, which has horizontality as a prerogative, allowing citizenship exercising as the individual’s production can interfere in the knowledge collective configuration, and, at the same time, presenting a teacher who acts in the intermezzo of the process transsubjective relationship within a virtual environment.

We have also chosen to work the media language by using computing, because the student, at this age, shows interest on the symbolic communication used by the media, develops hypothetic-deductive thinking, appreciating the work with projects (from the conception through planning and the final production), and seems to have a critical consciousness on the artistic production. Sometimes, this critical consciousness leads the students to the visual expression inhibition and blocking, as they consider their production is unsuitable for communication, that is, they restrain the visual communication just to “know how to draw”, not considering other visual composition resources. With computing resources, the students are more focused in the creative process, in elaborating a visual thinking rather than manual skills.

In addition to the conceptual and procedural contents, we have also observed attitudinal changes. Philippe Perrenoud (2000) states that training for the new
technologies is training judgment, critical sense, hypothetic and deductive thinking, observation and research skills, imagination, memorizing and classifying abilities, reading and analyzing of texts and images, the representation of communication networks, procedures and strategies.

Digital image research is based upon hypermedia art theoreticians, such as André Parente, Roy Ascott, Pierre Lévy, and Manovich, where we found concepts-tools aiding to understand and enrich the students’ processes. According to André Parente: “The challenge of those producing images is exactly knowing in which sense it would be possible to extract images (jamais vu, pure exteriority) from clichés (déjà vu, pure interiority), images giving us a reason to believe in the world we live” (1999, pg. 42). There are some particularities in the way of using this technology, which allow the interference and alteration of the shown contents by means of the interaction. According to Pierre Lévy:

A digital model is not read or interpreted as a classical text; generally it is interactively explored. Contrarily to most functional descriptions of the analogical reduced role or models, the computing model is essentially plastic, dynamic, having a certain action and reaction autonomy”. (1993, pg. 121).

Ending

Meeting with the Community

Together with the School board and the pedagogic coordination, we have organized an activity involving our students’ families, not just in to know the project, but also to participate in it. Some families were already engaged, as they have driven their children to the meetings with people or to places to obtain the photos. We have, then, organized a meeting with all the seven grader’s parents, forming a round-table composed by the teachers involved and a psychologist representing the Health Environment of the Moinhos de Vento Hospital.
At this meeting, the project goals were presented, as well as the need of having a new view, of resignifying and rethinking about ourselves, our acts, of evaluating what we do, and think, and how we act. The parents’ report was the most important moment, as it has evidenced the knowledge about what they had already experienced, the attempts to help their children and how the context of the project has been already incorporated to the family, to their day-by-day, and even to the convivial relationships. Finally, we have invited all to the next stage of the project: an Exhibit of the Works which was held out of the School.

**Exhibit in the Community**

At the end of the project, we have used the Exhibit of the works, in the Health Environment of Moinhos de Vento Hospital, at the Iguatemi Mall, Porto Alegre (a space where youngsters normally hang out) as an integration activity between the students themselves, the students and the teachers, the students and their parents and the students and the community. The exhibit included three different media: printed photos exhibited on panels - one photo during the field work and one photo after manipulation in Fireworks, from each couple of students; computers with the students’ work – students showed their work individually; and a datashow presentation exhibiting the multimedia works on Photo Story 3, uninterruptedly shown during all the exhibit period. While showing their works to their parents, friends and visitors, the students have generally demonstrated good domain of the software programs they had used (Figure 2).

![Figure 2: Exhibit of the works](image)
The exhibit was largely announced: invitations to all the school community, banners calling to the event, communication media spots: newspaper, television and mailing. The exhibit was held out of the school in order the students could interact with the community of their city, attributing a sense of authorship to their narratives, validating the announced messages, having a citizen sense of contribution to social and cultural change.

Final Considerations

This project has allowed the students to perceive the acquisition of some capacities, such as: self-direction, creation, problem formulation and problem-solving, integration, interpersonal communication and cooperative mind, understanding of the art and technology language codes. We have also noted that the computing environment has facilitated self-direction and cooperative mind, as students came to the computing lab and easily interacted with the computer, surprising teachers and helping those who needed aid. They showed pleasure in helping the others, providing technical knowledge and information. We have also assessed, through their comments, that the knowledge they had acquired was applied to their day-by-day, as many of them said they were using digital photography in a differentiated way and manipulating the software programs (specially the photo story, which is a free software) at home.

The exhibit of the works to the school community has provided the students with a concluded experience, from planning to the final product shown to the community, a sense of authorship on their makes, propitiating the youngsters’ commitment within the social context, their action within ethics and citizenship. Such principles and goals should guide the current school, participative and participating, associating these values to the new available technologies, in order to widen knowledge, abilities and competencies.

This work has aimed to research the way of producing imagetic constructions within the encounters and disencounters of associative interpretations, not just as illustrations and clichés, but emerging in senses full of significances. There is a factory
of signs in digital images, which shall be navigated and (re)signified. We herein state the importance of pedagogic practices based upon multimedia technologies aiming at visualizing space-and-time configurations subverting lineal and dichotomic structures through expression ways constructed in multiplicity (Oliveira, 2006). We believe teaching by using new technologies is not based on data amounts, but on problemizing realities through open, complex, multiple, and subjective concepts with irregular contours within a dialogic meeting. A plastic, hybrid, cognitive environment, where each person's interpretation gives birth to another interpretation, opening the creating recursive cycle where expressing implies an intensive rather than extensive nature.

The knowledge collective construction has also explained another way of learning. The cooperative learning has horizontality as a basis, allowing the exercise of citizenship as the subject’s production may interfere in the knowledge collective construction. There is a valorization of the individual interferences, as they become indispensable in a singular collective construction. Within this scenario, the teacher is a facilitator and a mediator, acting in the intermezzo of the transsubjective relationships.

It is undeniable that ICTs are changing the social and educational relationships, promoting changes that exceed the simple use of technology; however, we have to ask ourselves how these changes may affect the cognitive processes and which mutations this new digital interface causes. The digital world proposes new ways of dealing with information and communication, new ways of dwelling in space-time, new conceptions about the reality (virtual and actual), new imagic constructions being constituted, thus, a world carrying the Humanity cultural mutations. We shall consider the way ICTs throw us a potentiality as a differential of a humanist perspective or reduce us to conservative close systems, or even to exclusion. Technologies are not good or evil, and neither neutral; they cannot be considered isolated, but, in their ways of acting, subjectivizing, producing sense and knowledge, of causing qualitative changes in the ecology of signs, promoting other intersubjective relationships and new teaching and learning processes in the ruling digital culture.
References


