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CHALLENGES TO BASIC VISUAL AESTHETIC EDUCATION AND IMPLICATIONS ON THE CURRICULUM AND TEACHER EDUCATION IN SELF-ECO-COMPATIBILIZATION WITH THE INVOLVING EMERGENCY[1]

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1. Previous Presentation to the 2nd Art Education International Congress at the Higher School of Education, Viseu-Portugal - 2023.

Abstract: This research aimed to: (I) Reflect on the challenges the involving emergency poses to Visual Aesthetic Education (EEV) - mainly the expression of adolescent questions, threats to ecology, violence, or lack of control over using Artificial Intelligence. (II) Understand the implications of these challenges for a curriculum that, at the end of the 9th basic grade (up to where EEV is mandatory), is a solid anchor for integral visual aesthetic development, throughout life; and also, the requirements that arise for the education of the respective teachers. The methodology includes case studies of school projects in the country, where we observed the search for answers to emerging challenges; consideration of the evolution of influential artistic technologies in schools and the 2023 UNESCO's Recommendation on Artificial Intelligence in the school experience; and reflection on a reference (not a model) for the interaction and valuation of the school work carried out - including the processes of disseminating lived experience. We are based on the complexity of the EEV, interpreted as triangularity by Elliot Eisner, Ana Mäe Barbosa, or Elisabete Oliveira - pointing to its dimensions/functions: material/technological; social/communicative; and ontological/life organization. We conclude on the need for (1) Sustained questioning of the involving emergency - its constraints, tensions, and resources. (2) Education/qualification of young people and teachers, which integrates the scientific-technological contribution, without prohibitions and with the development of the meaning of a humanized life, where innovation - integrating Artificial Intelligence - can serve the person and the communities, with risk but without creating dependence, alienation, dystopia. (3) Critical meaning and intervention, for a constant self-eco-compatibilization of teachers and students, not of conformity, but of creating the "new" necessary to improve the quality of life. (4) Awareness of the intangible cultural heritage value of the school visual creation - in Portugal counting 75 years of freedom of drawing -, testifying to experience/culture; and that, as the sustainability of the EEV is continually threatened by reductive educational visions, a movement recognizing it as a UNESCO's Cultural-Visual Heritage Site will be desirable.

Keywords: Curriculum, School projects, Teacher Education, UNESCO's Cultural-Visual Heritage, Visual Aesthetic Education.

INTRODUCTION

This research aimed to:

Reflect on the challenges that the involving emergency poses to Visual Aesthetic Education (EEV) - mainly the expression of adolescent questions, threats to ecology, violence, or lack of control over using Artificial Intelligence.

Understand the implications of these challenges for a curriculum that, at the end of the 9th basic grade (up to where EEV is mandatory), is a solid anchor for integral visual aesthetic development, throughout life; and also, the requirements that arise for the education of the respective teachers.

METHODOLOGY

The methodology includes case studies of school projects in the country, where we observed the search for answers to emerging challenges– field collection or by email – with a procedural basis on Verma, G. Beard, R. (1981); consideration of the evolution of influential artistic technologies in schools through content analysis of a brief informal questioning, according to Bardin, L. (1977); and reflection on the 2023 UNESCO's Recommendation on Artificial Intelligence in the school experience. For Teacher Education, reflection on a reference (not a model) for the interaction and valuation of the school

work carried out - including the processes of disseminating lived experience.

THEORETICAL FOUNDATION

We are based on the complexity of EEV, interpreted as triangularity:

- By Elliot Eisner, who assigned to EEV the processes: cultural, critical, and productive. (Eisner, E. 1972)

- By Ana Mäe Barbosa, who – in a historical-social emphasis –, in Basic Education of Visual Arts, proposed the approach: read, make, and contextualize; with a current focus on collective creativity (Barbosa, B. 2005; 2023).

- By Elisabete Oliveira – since INSEA-Rotterdam 1981, in a holistic understanding–, pointing to the EEV, the dimensions/functions: material/technological; social/communicative; and ontological/life organization (Oliveira, E. 2010).

Some fundamental concepts we consider:

EMERGENCY and TRANS-CULTURE): continuous change requires a response to the unpredictable, uncertain, and risky; and the interaction of actors in diversity (Berger, R. 1996).

LIQUID TIMES AND THE IMPORTANCE OF EVERYDAY LIFE: There is a need for people from different origins and ways of life to meet, negotiating the differences in emerging living (Bauman, Z. 2007); philosophy and democracy emerging from everyday life (Sandel, M. 1982).

COLLECTIVE INTELLIGENCE (Levy, P. 1994) and LEARNING SOCIETY (Berbaum, J. 1982;

1996): there is an urgent need for synergy of potentially formative energies, in sharing common living.

COMPLEX THINKING: It is at the basis of our methodology – with roots already in the *groping*, referred to by Freinet, in the face of the unknown –, by proposing learning through error and uncertainty, integrating dialogue, recursiveness, and hologrammaticity. Attending to glimpses of SERENDIPITY – emerging connections – on the way (Morin. E.; Motta, R.; Ciurana, E-R. 2004).

AESTHETICS: understood as: the orientation of energy towards quality*, when creating form (Oliveira, E. 2010).

*Anchoring in *qualia*, character (Peirce, C. 1958).

URBAN ART – *PLACEMAKING* – CO-CREATION: collective intervention in the socio-aesthetic characterization of living spaces (Menezes, M. 2021).

INTELLECTUAL EMANCIPATION vs. IGNORANT MASTERY: a passage from the magnitude scales of the representative tradition to the recognition of the capacity and action of anonymous people (Rancière, J. 1998; 2010).

SELF-ECO-COMPATIBILIZATION: continuous updating of the response to the involving emergency, individually and with other actors; reflection-action method – experienced in *Didactics*, in EEV/Visual Arts Teacher Education, in planning-evaluation-dissemination processes, and, also, in the sense of necessary process, in general (Oliveira, E. 2010).

FREEDOM – We converge with the following proposal: understanding and the right to free expression, socially responsible; with attention to Artificial Intelligence instruments that operate to replace human thinking (Pimenta, E. 2022).

ARTIFICIAL INTELLIGENCE/CHAT-GTP: We refer to this as a computer resource, arriving in schools in Portugal in 2023, which, for now, does not seem to replace the critical spirit…

EXPLORATION OF OBJECTIVE 1 - RESULTS

Reflect on the challenges that the involving emergency poses to Visual Aesthetic Education (EEV) - mainly the expression of adolescent questions, threats to ecology, violence, or lack of control over using Artificial Intelligence

Using the Pilot Project of ExplorEAUL – Artistic Education Exploratory at the University of Lisbon –, which we have been installing at CIEBA-FBAUL, we find files of Projects through which, progressively, capabilities of representation/intervention of/in the environment are acquired, with the awareness of the environmental quality to be preserved and valued; some cases are documented:

MATERIAL DIMENSION – TECHNOLOGICAL FUNCTION:

focuses on a progressive interaction with technology and the environment

TECHNOLOGICAL EDUCATION EVOLVES IN THE DISCOVERY AND REPRESENTATION OF/ FOR THE ENVIRONMENT

The environment is accessed through the study and model of housing, with a regional character to be discovered and preserved. We move on to manually constructing a model imagined for the future and detailing it using computer technology; and, currently, modeling by artificial intelligence/robotics and 3D printing. (F1)
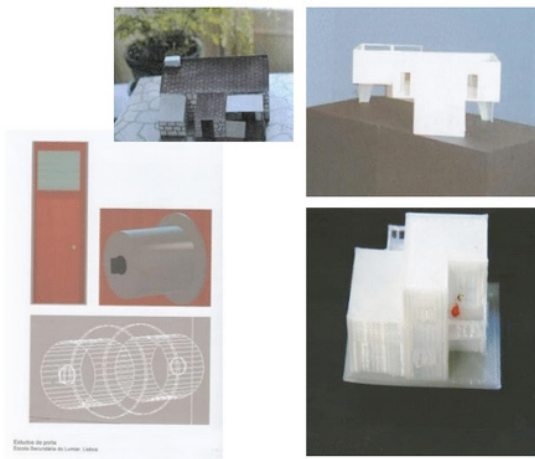

Fig.1. (From left to right and top to bottom): Built Heritage Study. Advisor Isabel Cottinelli Telmo*. E. Preparatory Francisco de Arruda. 1973. / Modeling & Computerized design. Advisor Luis Garlito. 1998-1999. Lumiar E. Secondary / 3D model. Teacher Arthur Coelho. Robotics Club-E. B. 2/3 Venda do Pinheiro. 2023. (1930-2021.

Photos of the Teachers, except the last one, by Elisabete Oliveira.

*We pay homage to this notable Professor in the EEV area, who passed away in 2021, at the age of 91.

TECHNOLOGICAL CREATION LEAVES THE SCHOOL FOR THE ENVIRONMENT (FIG. 2)

Fig. 2. Robotic bicycle with the ability to write. And a bicycle integrated into the parade of school visual creations, for the final exhibition of the academic year, at THE PLACE OF DRAWING. Teacher Cristina Pinto. Valbom E. Secondary. Photos: Elisabete Oliveira.

THE SCHOOL EXPLORES THE "TRADITION-INNOVATION» BALANCE:

As the Guimarães region has a protected species of the lynx and the tradition of bass drums, a robot inspired by the lynx was built in the robotics class – whose mascot was created in EEV; and a bass drum was integrated. (Fig. 3)

Fig. 3. Guidance and Photo from the Robotics Club. E. Sec. A. Sampaio. Guimarães. 2022.

TECHNOLOGY – ARTIFICIAL INTELLIGENCE, AI – SERVES AS AN INTERVENTIONIST IMAGE AGAINST POLLUTION

We exemplify this with a *montage of images, recreated* from data obtained from AI (Fig 4). Questions arise regarding the place for the student's creativity, controlling alienation by the machine: against stereotypes, and other formal solutions that we could call *stylistic*.

Fig. 4. Work by Daniel Silva (17 years old), Professional Photography Course. Teacher Diogo Felix. Seomara da Costa Primo E. Secondary. Amadora.

Photos: by the student, from the internet, and his final work; portrait of the student, by E. Oliveira.

ECOLOGICAL INTERVENTION IS UNDERTAKEN IN EEV AND SCHOOL CLUBS - THROUGH CREATION USING WASTE. (FIG. 5)

Fig. 5. Drawing robot, artisanal creation using waste, from the Robotics Club of E. B 2/3 Venda do Pinheiro. Advisor Artur Coelho. Photo: Elisabete Oliveira.

This path, of good EEV practices since the 60s, was observed, for example, in the installation *Loja da Avó Filó*: life-size figures and games made of disposable materials, created by educators, parents and children from Jardim Infantil Quinta do Sol - Agrup.º Valbom, eco-schools network). Montage-Exhibition in The Place of Drawing: Cristina Pinto. 2023.

SOCIAL DIMENSION – COMMUNICATIVE FUNCTION:

focuses on violence against children and Young Persons (Fig. 6) and the global and local environment (Figs. 7 and 9);

and search for visual communication even for people with visual needs (Fig 8).
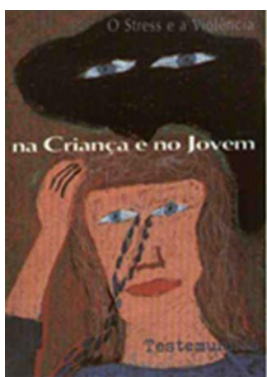
SOCIAL VIOLENCE

Fig. 6. Cover of the book *Stress and Violence*, by José A. Marques.

Teacher Manuela Caldeira. E. B. 2/3 de Azeitão. 1996. Photo: Elisabete Oliveira.

Fig. 7. Drawing by Stanislava (Ukrainian, living in Valbom for several years). 9th Grade: in tune with Ukrainian feelings. Advisor and Photo: Cristina Pinto. Valbom E. Secondary. 2023.

Fig. 8. *Inclusive Art* Project. Teacher Manuela Frade, 5th Grade, from Groups 4 and 2 of Évora – incl. deaf and low vision students. 2016/2019: providing means for the blind, deaf, and deaf-blind – in interaction with painting, poetry, and music https://padlet.com/pintora_mlarfrade/hdaknbvcj4tc - Photo: Manuela Frade.

VIOLENCE AGAINST NATURE

We document this approach, through a school project - ExplorEAUL File (Fig. 9)

Fig. 9. Project (awarded) Arrábida-Guernica. Process – which included going to Arrábida mountain and beach; raising awareness of the work of art and experimentation with techniques; and product (35x78 cm). Students aged 15-18. Teaching and File of Alexandra Seabra. E. Sec. da Moita. 2018. (File we disseminated, as a reference, at Art-Education International Congresses).

ONTOLOGICAL DIMENSION – LIFE ORGANIZATION FUNCTION:

focus: self- and eco-compatibilization with the involving emergency(Fig. 10 and Fig. 11)

SELF-COMPATIBILIZATION WITH THE INVOLVING EMERGENCY EXPRESSED PLASTICALLY

Fig. 10. Project and Photo of the CAM-FCGulbenkian Educational Service, in partnership with schools. 2008: Art and Education for change and transformation of identity/life project.

ECO-COMPATIBILIZATION WITH THE INVOLVING EMERGENCY, IN A COLLECTIVE ARTISTIC PROCESS; PARTICIPATED CREATION; PUBLIC ART - CULTURAL HERITAGE VALUE

Collective involvement to improve the community's quality of life through plastic intervention can include people of great diversity and interact with surrounding schools, as in the *Interculturality Planisphere* Project. 28.10.2015. Fróis-Monte da Caparica-Almada Urban Park (Multicultural urban area) with an open stage on the back, in a space with a bench for events. Here, with 2,178 authors aged 3-78, and 68 volunteer tutors in the classroom; creating hundreds of tiles with direct object transfer, glazed at 1,000 °C; and making its PI algorithm available, for

critical and creative improvement, Guidance: Casa da Cerca-Almada, in partnership with FBAUL. Coordinator Mário Campos. The international repercussions of this Project reached African Cape Verde. The process of creation and exhibition/intervention in the environment in this approach to school Visual Aesthetic Education, requires the interaction of the various areas of knowledge (not just inter-arts) and its actors, as in the process we document below (Fig. 11):

Fig. 11. Final presentation of 2022-2023, in Arts - Annual project of the Group of Schools of Valbom. Coordinator Professors Cristina Pinto (Author of the photos) and Cristina Varela.

A holistic interaction was observed: Involving space, with school work displayed on the walls of The Place of Drawing - Júlio Resende Foundation, Valbom / The creation of a floor panel – *What we do leaves marks. And you, what do you plan to do for the future?* - by 4 students, including the Ukrainian Stanislava and the Belarusian Alan (in the foreground

in the 1st Photo) / Dance / Music (and also Poetry) / Magic / Opening to the Community.

QUESTIONS FROM STUDENTS ABOUT THE PLACE OF AI IN WORK

We asked for a sample of responses from a diversity of 15 students/class, selected at the teacher's discretion, to the question above, either by going to the EEV class or asking for answers by email. We obtained 58 responses from 4 B2/3-Secondary Schools, on the outskirts of Lisbon and Porto; Lisbon's industrial belt; and from a rural environment but with a strong Robotic Center. Through the respective content analysis, we emphasize:

- Knowledge of AI is scarce and predominantly focused on Games.

- Ignorance on the part of the majority regarding the applicability of AI to EEV* work.

- Absence or little synergy between EEV and School Robotics Center/AI Resources.

*No interaction between the respective teachers, even if the work using AI, in interdisciplinarity with Portuguese and Environmental Sciences, ends with a product that includes Illustration

- (For Students aged 16+, at Industrial Cincture School) - *Questioning* about the implications of AI in their future: recognition of its scope in facilitating/enhancing work but fearing a replacement leading to job loss.

EXPLORATION OF OBJECTIVE 2 – RESULTS

Understand the implications of these challenges for a curriculum that, after the 9th basic grade (up to where EEV is mandatory), is a solid anchor for integral visual aesthetic development, throughout life, and also, the requirements that arise for the education of the respective teachers.

UNDER DEVELOPMENT/ CURRICULUM EXPLORATION

Homologously with the areas of education to be promoted in students-in-the-community, the curriculum must also provide room for the exploration of these areas; and teachers must present self-eco-compatibilization with the involving emergency, seeking to currently respond to it in the three Dimensions and Functions focused on 4): if the teaching units do not have a holistic impact on them, they will fall short of their education potential.

Transdisciplinarity, transculturality, transgenerationality, and other forms of collaboration are increasingly occurring, as documented by the Projects in 4): sustained vigilance will be necessary so that they point to the valorization of understanding, peace, and quality of life.

But we wonder whether the EEV is sometimes diluted into instrumentality for all types of school projects and celebrations, draining it of time and a specific curriculum?

And what will be essential to teach in such a curriculum?

We also consider the exploration, with Bauhausian roots, of the qualities and elements of visual expression to be valid: balance, tension, movement, rhythm and unity / punctual, two- and three-dimensional forms - 4th dimension, time; light-color and texture: since the 70s, not finalized for themselves but directed towards a socio-cultural intervention, where the energies of rupture, entropy or dystopia, more accentuated in contemporary times, are also considered. Will an approach also be specific to Visual Cultural Heritage, from local to global, relatable to geometries – recontextualizing the exploration of arcs, ellipse-parabola-hyperbola, dimensioned drawing, orthogonal systems, and perspectives?

For example, regarding the incorporation of technologies into school practices, such as

cell phones and AI, sustained consideration will be required:

Alienation is known due to the uncontrolled use of a cell phone; or the superficial sensoriality, of immersive involvements: in Stoneman, A. (2022), it is cautioned that *culture is not just a matter of feeling. It is also a way of knowing and understanding the world. Immersion prevents the discursive, by reducing the distance necessary for criticism.* How to educate, with resources such as AI and the metaverse?

UNESCO issued recommendations to schools, with an emphasis on interaction (UNESCO, 2021) (Nóvoa, A. 2021). However, in this context, the aim is to prohibit the use of cell phones in the classroom: will there be a lack of solid ethical education, leading the student, under their own responsibility, to decide when it is essential to use the cell phone? We believe that, only through continuous eco-compatibilization, will there be room for the curricular inclusion of computer photos or video, instrumental or as an artistic product; or will respond to the demands of the emergency in the environment.

IN TEACHER EDUCATION

Teaching consistent with the orientation towards (self-)eco-compatibilization will involve planning, implementation of teaching units, valuation/evaluation, and dissemination of experience, in two directions of continuous interaction: with other actors/community and with the involving emergency.

In action research, we experimented/ observed with Professionalization-in-Service graduates (FPCEUL, current IEUL, until 2006) – in our performance in EEV Specific Didactics and Educational Technologies, and in theirs –, implications such as listening to the student interests, to intertwine them with the education objectives; evaluative analysis, always formative, continuous or summative, starting from self-evaluation, passing through hetero-evaluation and ending in the teacher's well-founded judgment, rarely divergent from the processed assessment: this is how the criteria of the students' value were determined, fairness prevailing about possible dissatisfaction.

Graduates asked us: *what would be the best assessment grid?* Between two groups, the holistic weighting of evaluative criteria was discussed, reaching the next grid, with high inter-agreement (which we defended in our 2005 PhD), but not as a *model* but rather as a *reference*: to be re-weighted for each Project and with parameters that should reflect the *novel*/new priorities of the involving, which can guarantee the sustainability of its validity. (Oliveira, E. 2010). (Fig. 12)

Fig. 12. Assessment grid (Oliveira, E. 2010).

For example, in the present involving emergency, should the creativity of the student who uses AI be limited to image import? Assembly? Recreation? What is originality? Authorship issues are under debate, ethically and legally, with regulation for April 2024, by the AI Act: technological policies that respect Copyright and data used in model training – as reported by Luis Barreto Xavier, in the Theatre "O Bando" meeting of 17.02.2024.

If the value of manuality remains, how can we develop it?

In Initial Education/Master's Degree in Teaching and throughout teaching, the EEV Teacher must pursue holistic questioning (Pimenta, E. 2021), and sustained, oriented towards (self-)eco-compatibilization (Oliveira, E. 2010).

It is also necessary to raise awareness of the value of Intangible and Material Cultural Heritage, of school projects in EEV, preserving the repository of their records* and intervening for local and global recognition, and consequently, within the EEV disciplinary scope, the necessary curricular time and resources to be guaranteed.

*At CIEBA, FBAUL, we have been implementing ExplorEAUL - Artistic Education Repository at the University of Lisbon – Provisional coordinator: elisabeteo@netcabo.pt

The actual inventory phase includes documentation from Pioneering and Emerging Art Educators - in this case, with School Project Files in EEV/Visual Arts -, intending to share them on an *open-access* platform. The documentation in 4), in this Article, is part of this ExplorEAUL.

CONCLUDING REFLECTION

We conclude on the need to:

1. Sustained questioning of the involving emergency - its constraints, tensions, and resources.

2. Education/training of young people and professors, which integrates scientific-technological contributions, without prohibitions and, yes, with the development of the meaning of a humanized life, where innovation – integrating Artificial Intelligence – can serve the Person and communities, with risk but without creating dependence, alienation or dystopia.

3. Critical meaning and intervention for a constant self-eco-compatibilization of teachers and students, not of conformity, but of creating the "new" necessary to improve the quality of life. And, coherently, planning methodologies, implementation of teaching units, formative assessment – continuous and summative – of work (as mentioned above), and dissemination of experience, from Teacher togetherness and inter-students, and in interaction with the environment/community.

4. Awareness of the intangible cultural heritage value that represents school project/visual creation – counting 75 years of freedom of drawing -, witnessing experience/culture –; and as its sustainability is continually threatened by reductive educational visions, a movement recognizing it as National and UNESCO's Intangible and Material Cultural Heritage** would be desirable (Oliveira, E. 2018).

5. Continuous consideration of 8 pillars of sustainability (Oliveira, E. 2021, 2023):
    -   Autonomy, expressive and critical

appreciation / Work project by student(s) / Awareness of visual cultural heritage / Continuous self-eco-compatibilization / Technological updating / Assessment always formative, continuous and summative, self and hetero one / Sharing experience, with local-global dissemination / Autonomy/ curricular flexibility.

Record of school projects with repercussions on the environment, justified by their potential to safeguard the memory of the EEV/Visual Arts journey (especially since Free Drawing, 1947/8) and support the advancement of new experiences in response to the involving emergency: it is a heritage of *common knowledge*, finally beginning to be recognized in the second point of the UNESCO Report (Nóvoa, A. 2021).

This is a transcultural evolution, a contribution of schools to Portuguese and transnational Culture & urban space.

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