Audiovisual as an Atelier. Theoretical Framework and Educational Applications

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Abstract. An extensive scientific debate highlights the functions of audiovisual in media educational and teaching fields, individualizing some specific cognitive, imaginative, and emotional aspects. With respect to this debate, this article aims to introduce the idea that video could be considered as an atelier. This means to think about audiovisual as a space into which could be possible for people to build up original creations, share ideas, develop personal vision of reality. All this concerns a generative concept of video as an experiential environment. The second part of the article explains what this means and shows three possible uses of video thinking in the field of educational research, teacher training and classroom activities. The first one - *synaesthetic video* - explores the expressive opportunities offered by audiovisual language; the second one - *metonymic video* - recalls distant meanings, narrates concepts not by direct representation but by suggestion of memory and thanks to emotions; the third one - *metaphorical video* - uses a language closer to poetry than to prose, with the prevalence of symbolic features.

Keywords: Teacher's training and activities · Media Literacy · Visual Education

In this article we intend to reflect about the educational uses of audiovisual. Particularly we would like to support the idea that it can work as a creative atelier. Our analysis starts from a definition of the concept of audiovisual (par.1): it does not concern its expressive materiality, but the type of perceptive experience (audiovision) produced in the user. The functions (observational, documentary, narrative) and the environments within which it can be developed and used are then indicated. Naturally, video also represents a great opportunity to give shape to creativity (par. 2) offering itself as a possibility of writing, especially in the perspective of a critical building of knowledge. This is the case of the

atelier, considered as a creative aesthetic experience: audiovisual can be considered just as an atelier (par. 3) The last two paragraphs (4 and 5) provide some examples of the use of video considering atelier as a method of knowledge, articulating them in the three categories of synaesthetic, metonymic and metaphorical videos.

1 A Theoretical Framework

The evolution of media forms in the context of the so-called post-media society [1] involves a conceptual repositioning of many of the concepts that still seemed to work until a few years ago. One of these concepts is that of audiovisual. In fact, it is subject to a process of liquefaction: it loses definition with respect to its edges, it becomes contaminated, it risks being applied to any media experience. In this paragraph we intend to start from this fact, reflecting on the characteristics that define audiovisual today. Secondly, we will deal with its functions in the educational field. Finally, we will mention the digital environments in which it is possible to experience audiovisual, both in terms of production and use.

Talking about audiovisual liquefaction refers to how difficult it is today to recognize it from the point of view of its materiality [2–4]. This is due to the syncretic nature of audiovisual and its codical heterogeneity. Speaking of a syncretic nature means referring to the fact that audiovisual today consists of different communication modes [5] integrated in an articulated but substantially homogeneous form: just think of the widgets of a Web page, or the different frames that make up a story in Instagram. This syncretism is accompanied by a structural heterogeneity of the codes used: this makes audiovisual a complex semantic universe [6].

In the pre-digital era, before the introduction of multimedia and the Web, audiovisual was defined as a media founding its specificity in the coexistence of an audio track and a video track [6]. If this criterion were adopted, in the light of what we have said, today there would be really a few things that cannot be defined as audiovisual (a website and a YouTube channel, a video game and a TikTok channel) and this, as it is possible to understand, it would involve running the risk that everything (or nothing) is audiovisual.

For this reason, we have recently proposed [7] to change our point of view by proposing a definition of audiovisual that is not based on its materiality, but on the type of perceptual experience that it allows. Basically, today, rather than talking about audiovisual, thinking about a specific media form different from the others, it seems more appropriate to think about audiovision [8], that is a perceptive experience involving both viewing and listening and that expands more and more significantly even to the tactile experience. This shift from expressive materiality to perceptual experience is confirmed by the embodied orientations of neuroscientific research which, precisely in terms of audiovisual use [9], has advanced the hypothesis of an embodied simulation that would lead the subject, thanks to its mirror-system, to experience on the neuronal level the same emotions as the characters moving on the screen.

In synthesis, the "specificity" of an audiovisual does not depend on the type of technology or materiality, but on the skills of the user, on the social behaviors, cultures and institutions conditioning its production and circulation [10].

Defined in this way, what functions can audiovisuals perform in the didactic and media education fields? It seems to be possible to answer that these functions are essentially three: observational, documentary, narrative. Let's see them individually in greater detail.

The observational function refers to the possibility, through video, of observing elements or situations, taking them as an object of analysis, placing them at the right distance so they can be reviewed [7]. In the educational and didactic context, this need is met by movie sequences to be analyzed from the perspective of the case study or the analysis of the critical incident, but also the recording and retrospective analysis of simulations or real shots of teachers in a classroom situation. This is an audiovisual feature particularly used first in microteaching and then in practice analysis: a teacher is asked to give a lesson or to simulate it, it is filmed and then the video is used as analysis material, through discussion in explanatory group or interview [11].

The documentary function identifies in the video a very powerful tool to fix practices and experiences carried out. From this point of view, video contributes to pedagogical documentation by updating its format and integrating it from an expressive point of view. The "paper and pencil" documentation, in fact, was forced to go through a transcription process that involved translating what was observed into grapho-verbal codes through a process of description that often compromised respect for the materiality of what was observed. Video obviates this problem. Furthermore, the video-documentation is dynamic, it can be easily updated and integrated, it lends itself to retrospective analysis [7, 12].

Finally, audiovisuals can play a narrative function. Narratives, unlike description, open up greater spaces of creativity and push the subjectivity of the point of view from which things are told [7, 13]. The result is a personal product in which it is possible to identify representations and projections of those who made it. This makes storytelling video very interesting from a research point of view.

A final emphasis requires Digital Learning Environments which are used to develop visual and audiovisual narratives [5, 14–16]. The research distinguishes four types of environments:

– Digital environments that support learning through the use and production of visual and audiovisual resources [5, 15].
– Digital environments that support the development of visual intelligence and graphic intelligence through visual-iconic and visual-graphic forms [15, 17].
– Digital environments as socially produced spaces, places of meeting and reflection in which knowledge, experiences and relationships change and evolve [18].
– Digital environments as third spaces in which to aggregate materials from experiences lived and created both in real and digital space [14, 19–22].

2 Video as a Form of Epistemic Writing

According to what we told in the previous paragraph, we can think of how video today, especially at school, is accompanied by a considerable amount of potentially extraordinary opportunities in terms of reading and writing. Buckingham in his *Manifesto for*

media education [23] indicates some interesting ideas related to "visual texts", suggesting that the starting point could be the multi-literacy model of Cope and Kalantzis «according to which teaching and learning are the result of the interaction of four literacy practices» [24, p. XVI]. These are: (1) the contextualized practice, in which pupils learn by doing; (2) the direct instruction for the development of spontaneous skills; (3) critical framework to allow the distancing of the student, to then extend it to a wider social framework; (4) and, finally, the transformed practice, through reflection and awareness. This means that, today, working in the classroom with video should no longer provide for a passive use (i.e., in front of an IWB), but an interactive mode thanks to which students interact with the IWB itself, allowing them a direct approach to technology and content. It is no coincidence that John Hattie, the father of EBE, argues that the "passive" video is considered a "weak" and non-generative element in teaching practice (translated into effect size below the average threshold of 0.4) [25, p. 54], while "interactive" video (which allows for example to shoot some scenes and interpret them within the entire narrative), is built and/or enjoyed also thanks to the movement linked to the ability to develop knowledge and skills through body movements. This dynamic is judged by its meta-analysis as a choice of method that allows you to learn better, favoring an enactive approach to teaching.

We maintain that video, better to be considered a technological object and a functional tool, is a perceptive experience and a creative language potentially generative of various kinds of skills. From here we start again to tackle the concept of epistemic writing linked specifically to the possibilities of the visual. The model indicated above interacts with the model of Bereiter and Scardamalia [26], then reinterpreted by some Italian authors, including De Beni [27, p. 169) and finally, currently, by Parola and Anichini [28], reorganizing it in relation to the matching between analogical writings (which here we consider traditional) and media/digital, both in the pure approach (only media or only digital), but also in the spurious mode, which highlights the mixture of approaches, methods, tools and products.

Starting from associative, performative, communicative, unified and epistemic writing we have further reasoned [28] to verify a structural adaptation (four levels and no longer five), but also interpretative in relation to the definitions and contexts more oriented, in this phase, to media writings [29] and digital ones.

3   Audiovisual as an Atelier

An educational reading leads to consider audiovisual as a creative atelier, an equipped training space, aimed at experience, in which to give rise to processes such as observation, design, manipulation and experimentation. It is in the atelier that new methods of re-elaboration of experience are set, characterized by the intersection of discursive, iconic, sound, symbolic practices and forms of incarnation. The resulting experience has an aesthetic nature: the ability to feel is strongly linked to understanding and interpretation. It is precisely this aesthetic nature that enhances this interdependence, based on a sensitivity of the relationship [4] or, with the words of Bateson [30], on a pattern that connects. In reference to this experiential dimension, iconic and sound forms of the audiovisual weave a sort of sensitive warping made up of multiple actions interacting both internally

and externally and generating other connections [31]. The resulting audiovisual experience is the expansion of the perceptual feedback that embodies the experience of use. These aspects are confirmed by neuroscientific research which demonstrates how the audio-vision experience does not consist in the simple individual recording of a stimulus but in an interactive, articulated and deeply embodied social process, the result of collective training. In the atelier the subject relates himself to the others [32] through his own sensory apparatus and, in a space-time unfolding, participates in the becoming of dynamic and interacting forms, of sensitive-emotional solicitations and of phenomenal, interpretative and cognitive elaborations [33].

Atelier allows you to rethink the experience as an aesthetic experience, that is, as the possibility of recovering and enhancing the perceptive value in educational contexts that expresses itself in the sensory contact of audiovisual objects with the subject and with the communities co-participating in its creation. In this regard, we speak of open and plural design in which the audiovisual represents a collective art form [34] through a sudden break from everyday experience.

Audiovisual as an atelier allows us to grasp some main transformations in a historical, cultural, social, as well as pedagogical discourse, to understand specifically how the audiovisual space evolved towards a broader landscape in which sound and image are organically fused for composing a complex and dynamic system to give rise to original narratives giving value to the aspects of communication, participation and relationship. Noise and music have paved the way for a multisensory perception of space, in which the environmental character of the sense of hearing is crucial for the immersion of the viewer. It is precisely the notion of soundscape, introduced by Schafer [35], which has allowed us to reflect on the landscape as an element that is not only visual.

Within this multiple unity, the viewer of the audiovisual image can experience empathy and an authentic fusion with the landscape itself, immersing and transmigrating in it, identifying and becoming part of it, in a man-cosmos reciprocity. In this framework, the chromatic element can intervene to integrate even more intimately, and one could say almost symphonically, the viewer's sight and hearing. However, a need for sound images is increasingly emerging, able to lead us in these experiential landscapes to overcome an anesthetic indifference towards the landscape itself.

In this sense, the atelier proposes itself as a meta-space, with a multiform nature, which connects different spaces: digital and physical, personal and community, natural and artificial, conceptual and imaginative; and also spaces of social and cognitive relationship, near and far ones. Interesting in this regard is the point of view of Ortoleva [36, p. 298], which in the analysis of current media, with a specific reference to Youtube, describes audiovisuals as commonplaces, «in which millions of subjects learn every day, by trial and error to live, to move, to establish relationships, adapting the environment to one's needs and at the same time adapting to the constraints it establishes». The experiences that take place in the relationship between these many spaces lead to the definition of an audiovisual landscape, which does not exist in itself, but takes shape when someone who observes it, inhabits it, builds it [37].

The creative atelier in its phygital nature is therefore configured as an increasingly open and connected workshop space. Through a narrative approach, installations are

proposed that can be traced back to several expressive forms which, while manipulating the same substance (photography, street art, cinema, music, poetry…), redefine and transform contents, recounting original aspects. The attention is focused on some fragments, spatially and temporally distant, providing a new and semantically dense rereading. Starting from discrete, meaningful and significant units, atelier builds up new educational paths, made possible by the technological dimension of this space, which can be traveled in several directions, giving rise to a non-univocal fruition, but of a reticular and associative type, which opens up multiple interpretative possibilities [38].

4 Audiovisual Atelier as a Method of Knowledge

Atelier, as we saw in the previous paragraph, means "laboratory, workshop, studio", referring to the work of artisans/artists (painters, sculptors,…) up to the most modern creators (digital artists, graphic designers,…) of works multimedia of an increasingly intangible nature, from photography to video installations. Specifically, there is a progressive dematerialization of the artistic product for the benefit of a visual and audiovisual sensory experience that is completed and acquires meaning in the relationship with the observer/listener [39]. According with what Merleau-Ponty says about the relationship between the subject of sensation and the sensible qualities of the world: «Le sujet de la sensation n'est ni un penseur qui note une qualité, ni un milieu qui serait affecté ou modifié par elle, il est une puissance qui connaît à un certain milieu d'existence ou se synchronise avec lui» [40, p. 288]. The observer/listener of an audiovisual experience becomes in some way also a co-author. In this sense, the video constitutes a great opportunity to give shape to creativity [7] and to contribute to the construction of new meaningful relationships, configuring itself as a method of knowledge. Etymologically "research, investigation, investigation", the method refers to a "way of research" [41] which in the audiovisual as an atelier innervates both the production/use and reading/writing process. The video thus understood, quoting Deleuze [42, p. 30] «is not a means of recognition but of knowledge», centered on a series of visual impressions that «forces us to forget our logic and retinal habits». In this sense, three examples of videos are presented here, attributable respectively to synaesthesia, metonymy and metaphor [43]. The *synaesthetic* video inscribes, through appropriate technicalities, within a text structured on two different languages (visual and auditory) elements that refer to sensorial spheres of a different nature so as to offer unprecedented possibilities of perceptual realization ('I see' a sound, 'I feel' a color,…) [44, p. 39]. The *metonymic* video refers to an expressive linguistic procedure, which consists in the transfer of meaning from one image, the real one, to another evoked in the subject's mind based on a specific relationship of semantic contiguity (the container for the content, the material for the object, etc.). The *metaphorical* video is based on an implied similarity, that is, on a relationship of partial semantic superimposition: a frame is used, through an action of transfer/shifting of meaning from one dimension to another, to communicate a different concept from what it apparently expresses [45].

The synaesthetic video

The "aRtelier" video, which is part of the type of videos defined as synaesthetic, focuses on the activities developed by children aged 3–6, in the context of specific expressive-sensorial workshops proposed by the Municipality of Bologna. The courses offered are part of sensory education projects focused on experiences of light/color and sound/silence through an approach based on exploration, creative assembly and construction of materials. The spaces are set up so that children can freely observe and learn about objects, shapes, colors, sounds and express their emotions through the use of multiple languages. There are few constraints, and the rules are simple. Children are free to paint and color, get dirty, make noise and listen, immerse themselves to experiment, feel, analyze and elaborate [46]. The "aRtelier" video is the result of a significant design activity carried out by a team of synergistic and coordinated professionals, made up of pedagogues, educators, teachers and experts in the cinematographic language with the aim of experimenting new forms of audiovisual narration of educational paths proposed within the laboratories. For the construction of the video, lasting a total of 15 min, 20 h of activities were filmed both in the nursery and in the kindergarten. For video recordings, specific choices have been made: camera placed at child's height, close-up shots, use of the subjective and the semi-subjective. The goal is to return the point of view of children, their actions, the effects of their movements and their gestures, interactions with objects and with the environment (Fig. 1). However, "aRtelier" abandons the traditional format of didactic documentation to explore the expressive-synaesthetic opportunities offered by audiovisual language. The content of the video itself, focused on the live recording of the sensory exploratory activities carried out by children, calls for a meta-reflection on the synaesthetic potential of the audiovisual. In fact, it is the audiovisual itself that talks about audiovision, showing how it can make other sensory forms see or feel and leaving the subject with the task of reconstructing and creatively weaving the semantic threads that connect new perceptual emergencies.

5   Process, Product and Educational Design

Continuing the analysis of the types of videos that we have built in an "Atelier" context and which we propose to use in relation to cognitive objectives and learning outcomes, we come across a video format, what we have defined as "metonymic", which allows you to work in the didactic field to develop meta-cognition, analysis and reflection skills.

Metonymic Video

On the occasion of the launch of the digital exhibition "Di Terra, di Cielo e di Mare", curated by the University of Bologna and the Vatican Museums, we made a short video, lasting min. 1.49, with the aim of arousing curiosity about the proposed theme (Fig. 2), explored through a completely online exhibition that has become «a journey through the Vatican and Bolognese collections to understand how the explorations and discoveries, which began in the Fifteenth Century, have affected the representation of Earth, Sky and Sea highli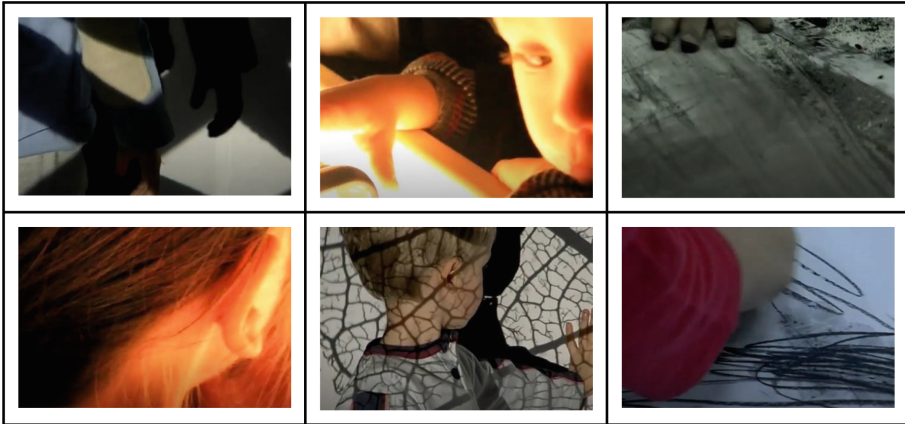ghted in planispheres, maps and globes» (In Internet, URL: https://www.doc.mode.unibo.it/sale-blu/di-terra-di-cielo-e-ofsea).

Fig. 1. Images correspond to as many frames extrapolated from the *aRtelier* video, created by MELA Laboratory of the Department of Education, University of Bologna. URL: https://www.youtube.com/watch?v=uuWdGb5yBZw&t=319s

Video features a globe-shaped ball, which comes to life and runs along the road that leads to the Astronomical Museum of the Specola, belonging to the Museum System of the University of Bologna. A little girl, fascinated by the moving object, follows it to the room of globes that recall sounds from distant lands and seas to her mind. At the end, the globe thrown into the air, concludes the path that leads from the land and the sea to the sky, indicating the three environments narrated and represented by the globes on display for the exhibition. The audiovisual language takes the viewer to a distant world, to the lands and seas depicted in the globes and evoked by the sounds and noises of exotic environments. However, it also projects upwards, with a launch towards the sky, which opens the gaze towards a horizon to be rediscovered. An evocative video also fulfills this function: it recalls distant meanings, narrates concepts not by direct representation but by suggestion of memory and thanks to emotions.

In the teaching context, such a structured audiovisual is particularly useful, thanks also to the emotional stimulation, to develop those skills of analysis and metacognitive reflection that allow you to recall individual information, insert it into a general information context and stimulate the formation of knowledge.

Metaphorical Video

Metaphorical audiovisual communication uses a language closer to poetry than to prose, with the prevalence of symbolic features. "Cinema of poetry" is what Pier Paolo Pasolini identifies as an audiovisual production strongly characterized by editing: the final product is a fusion of expressive elements of various kinds such as photography, movement, sound, music. Unlike "prose cinema", in which the story prevails, here the narration is not the main goal of the video, which instead is aimed to recall meanings and emotions for soliciting personal imagination [47]. In our production experience, as part of the media education lab of the Department of Education at the University of Bologna, we
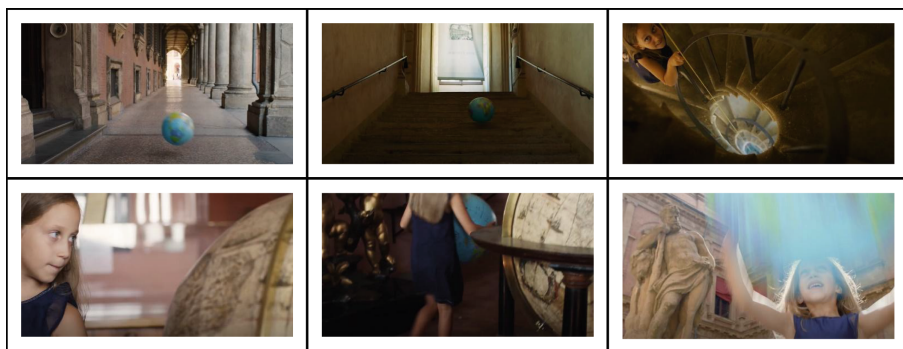
Fig. 2. Images correspond to as many frames extrapolated from the video "Di Terra, di Cielo e di Mare", created by MELA Laboratory of the Department of Education, University of Bologna, for MOdE, on the occasion of the inauguration of the exhibition with the same name. URL: https://www.youtube.com/watch?v=BKWXq-NALds

have often experienced this type of language, both in feature films and in short-term videos. This category includes the launch video of the new release of the MOdE, a completely digital museum that has the aim of communicating its virtual, interactive and collaborative nature, to encourage reflection on the opportunities and peculiarities of online museum displays. The trailer was designed to activate the viewer's imagination, called to build his/her own meaning as a digital museum starting from some suggestions-stimuli. Intentionally devoid of speech and accompanied only by a sound commentary, the montage focuses on the images encouraging us to search for personal meaningful relationships (Fig. 3).
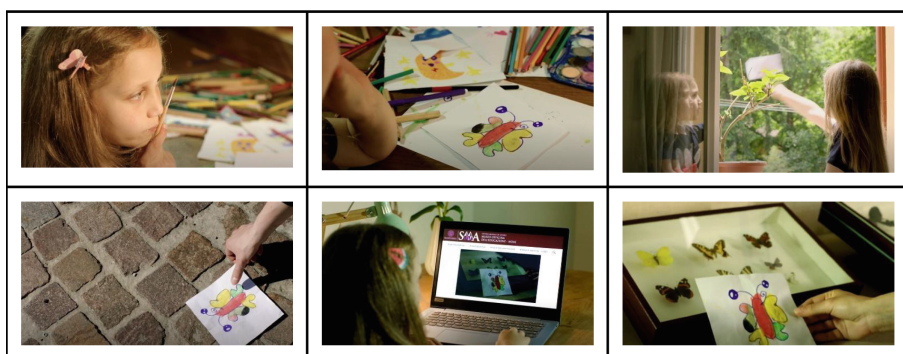

Fig. 3. Images correspond to as many frames extrapolated from the video "The girl and the butterfly", created by MELA Lab of the Department of Education, University of Bologna, for the inauguration of the new release of the MOdE - Museo Officina dell'Educazione. URL: https://www.youtube.com/watch?v=Ch_Ikczkt-M

Including the vision of this kind of product into a teaching context means having as goal the development of high skills; Bloom considers them as the more complex skills,

while Anderson and Krathwohl [48] put them at the top of the learning pyramid. These are creative and ideational skills, requiring the ability to understand, analyze and rework, adding however the goal of innovating the application of already known structures or devising new ones.

We have summarized the proposed teaching use of the three categories of video in a table, which aims to highlight the role of the viewer and the expected learning outcomes with the characteristics of each type of audiovisual (Table 1).

Table 1. Summary table: cognitive goals and expected learning outcomes in relation to the type of audiovisual product.

	WHAT VIDEO DOES	WHAT THE VIEWER DOES	LEARNING GOALS AND LEARNING OUTCOMES	WHAT TEACHER DOES
SYNAESTHETIC VIDEO	stimulates perception by offering an amount of detail	encodes perception (collects information and processes it, attributing meaning)	storing information and understanding	*structures the project, integrates different strategies, stimulates active learning*
METONYMIC VIDEO	it brings meanings back to the mind	reflects and reconstructs an information flow	analyze, decompose and reassemble	*structures the project, integrates different strategies, stimulates active learning*
METAPHORICAL VIDEO	stimulates imagination	starting from information data, it seeks new meanings to build a relationship of meaning	evaluate information data, imagine, create meanings	structures the project, integrates different strategies, stimulates active learning

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