

# Guidelines for an “Operative Constructivism” in the Learning Process Through Cinema. The Film Archive for Medical Education of the University of Florence

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## Summary

The aim of this paper is to offer a reflection on the use of specific and innovative educational strategies involving students and professors of the Faculty of Medicine at the University of Florence (Italy). Starting from an analysis of a properly created database named *Film Archive for Medical Education*, the Author shows how Cinema has a formative dimension that simultaneously involves the students, the trainers and the contexts in which they have to operate, hence becoming an extraordinary teaching tool useful for the structuring and reflection *on* and *of* the thinking.

**Keywords:** Cinema, Education, Constructivism, Archive, Didactics, Problem solving.

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## Resumen

Este artículo presenta una reflexión sobre la aplicación de estrategias específicas e innovadoras de formación que implican tanto a los estudiantes como a los profesores de la Facultad de Medicina de la Universidad de Florencia (Italia).

A partir de un análisis de una base de datos denominada *Archivo filmico para la educación médica* y expresamente creada para este fin, el Autor muestra cómo el cine posee una dimensión formativa que compromete al mismo tiempo al estudiante, al formador y a los contextos en los que tienen que actuar, por lo que es una extraordinaria herramienta de enseñanza útil para la estructuración y la reflexión *en* y *de* el pensamiento.

**Palabras clave:** cine, educación, constructivismo, archivo, didáctica, resolución de problemas.

The author state that this article is original and has not been previously published.

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## Why a Film Archive in a Faculty of Medicine?

The *Film Archive for Medical Education*, available on line since the 1st of March 2012, is a technological product of the “Medical Education Lab<sup>1</sup>” of the School of Human Health Sciences at the University of Florence (Figure 1).

This tool collects and classifies, in an aptly grounded and justified way based on planning and methodology, short video sequences (*scenes*), taken from different types of audio-visual materials (*films, documentaries, short films directed by students, TV series*), systematically selected and collected in relation to specific thematic contents (*key words*), considered of crucial importance in the field of healthcare professionals’ education (*professional fields*).

By displaying in a multimodal way (i.e. through images, text, videos and sounds) a series of information, this “platform” makes it clear how the human cognitive/perception mechanism is strictly bound to a complexity of elements which are subjective, corporeal,

experiential, mnemonic and sensorial. Hence it is not a mere collection tool of different cinematographic types, nor an additional guide<sup>2</sup> to stress the relation between cinema and medical education.

As I have mentioned previously elsewhere<sup>3</sup>, the *Archive* must be considered as a tool that gives the opportunity to several training subjects to decode and interpret significant information they themselves have contributed at identifying, to confront themselves with the voice of their own life-experiences as well as their own sense perceptions, to highlight the cognitive relations they have as individuals with others and the “social” behavior of knowledge and learning.

As the ongoing implementation of the *Archive* is showing year by year, the adoption of cinema in the educational field reveals how learning is a process that depends upon the tools adopted to solve a given problem and based on knowledge *construction* and not just on its passive *transmission* and *reproduction*<sup>4</sup>.

Starting from this premise it is clear how cinematographic practice and education can find their own recognition within a *reflective* perspective that simultaneously makes everybody actor and observer of one’s own experience as well as that of the others.

## Guidelines for an “operative constructivism” of the learning process through cinema

Detecting the ways through which cinema can become a didactic tool, useful for the structuring and the reflection on and of thought, allows to promote an “operative constructivism” of the learning process<sup>5</sup>, which seems to me quite urgent. As an academic teacher/researcher at a faculty of medicine and as the founder, operator and administrator of the *Archive*, I see two needs on a daily basis: enabling the training subjects to learn, gain critical, planning and cooperative skills<sup>6</sup>; promoting a reflective learning method through technologies in order to guarantee an active and aware participation in the first place. For this reason, I therefore aim at briefly defining and presenting the principles and objectives of this learning method, starting from the *Archive* experience and the employment of its films<sup>7</sup> that, up to now, represent the primary structure, principles and objectives of this learning method.

### 1. The point of view and data elaboration

The first aspect to highlight when using the *Archive* has to consider the viewing as “oriented”

The screenshot shows the home page of the 'Archivio Filmico per la formazione medica' website. At the top, there is a navigation menu with links for 'Home', 'Il laboratorio', 'materiali per la formazione', 'progetti', 'link utili', 'chi siamo', and 'contatti', along with a 'registri' button. The main content area is divided into three columns. The left column contains introductory text about the 'Laboratorio di Medical Education' and its role in medical training. The middle column features a video player for the film 'UN MEDICO UN UOMO' with a play button, a description of a scene, and metadata including keywords, professional fields, film type, and duration. The right column contains a search interface with fields for 'Cerca per film' and 'Cerca per scena', and filters for 'Parole chiave' and 'Ambiti professionali'. The footer includes contact information, legal notes, and credits.

Figure 1. Home page.

towards signs/symbols upon which, we as individuals, build our own consciousness.

If we take into account the way this tool has been used in these years, particularly in some didactic laboratories, activated by specific degree courses (Professional Education, Physical Therapy, Health And Sports Sciences, Professional Studies In The Health Sciences), the above mentioned aspect is clearly evident. When confronted with an external stimulation, containing multiple information which could potentially compete one against the other, students normally tend to “select” in the first place what does not collide with their own thought models. Verifying collectively with the initial support of visual stimuli, the “modes of understanding” that have elicited and produced in these training subject specific meanings (for instance, those concerning different ideas of body, health, disease, pain, etc.) appears to be useful in letting students understand that what we see is actually determined by what we have *previously* experienced.

If the biomedical paradigm owes its high levels of therapeutic effectiveness to a reductionist system that led to discard information considered as not relevant (by organizing itself upon models of disease, patients and symptoms too often narrow and rigid, not inclined to openings and exchanges with other “point of views”<sup>8</sup>), cinema can help these subjects by offering diverse elements in a language very ‘different’ from the usual one, elements who also deal with the emotional sphere, the phantasmatic world, stressing “how” and “why” suffering states are object of interpretation, that is constructs of the personal and social imagination<sup>9</sup>. To sum up, by presenting as “possible” those elements usually not coherent with the dominant biomedical paradigm, the *Archive* can contribute to make them available in the response mechanisms being activated by the training subjects in a given situation, thereby supporting a much wider and articulate patient acceptance during treatment (Figure 2).

## 2. Re-organizing our network of meaning attribution

As it is our desire to promote a path which regards as crucial for the learning experience (and consequently for the training activity) not only the word but also the visual image, the second aspect to consider deals with the capacity a given image has to stimulate an “emotional” thought in the viewer, especially in relation to “things” often silenced or kept hidden.

When professionals find themselves in a situation where they are not able to gain the information rele-

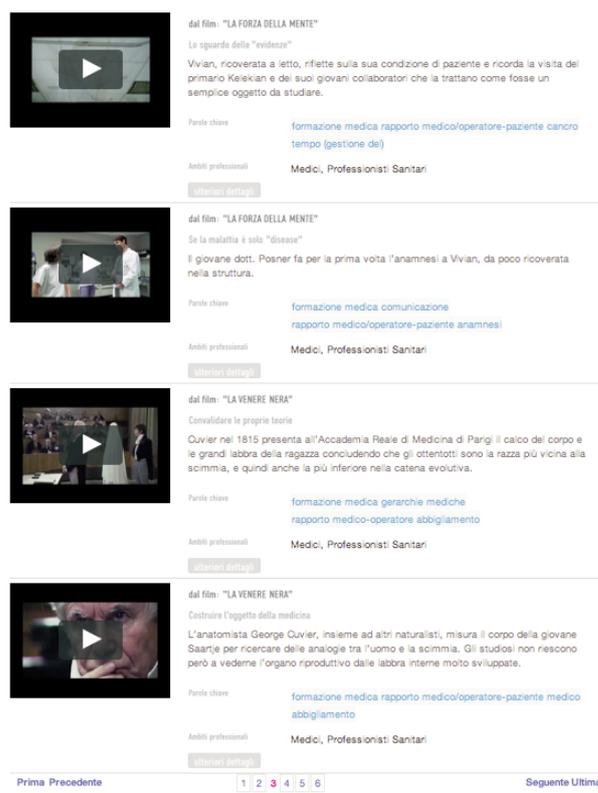


Figure 2. Scenes.

vant for *them*, they are inclined to prefer a highly technical approach, just to “guard” themselves against interpretive risks which could jeopardize their professional identity. The consequence for such a defense mechanism, truly impoverishing for a real patient management, is to endorse the idea that in the healthcare professional field a more “detached” and “disconnected” way of dealing with one’s own body, as well as with that of the other, is to be preferred. Therefore cinema can offer some alternatives to general learning schemes based on excessive measures of mere technical expertise, offering training subjects (as well as healthcare professionals) an opportunity to meta-reflect on their own intentions, or to try understand how a given event (even an extremely painful one) did or did not produce in them “cognitive reassurances” by activating precise organizations of sense.

I therefore think that film language, by renewing “clouded” or “censored” sensory perception experiences in healthcare professionals, can help them reorganize their personal network of attributions, semantic organizations and mnemonic re-interpretations. Through cinema, it is possible to facilitate a training and self-training movement capable of envisioning the idea that in our relation with reason there are specific cognitive activities<sup>10</sup> taking place, which distance themselves from

fixed procedural and stylistic schemes, and which embrace instead production processes of concepts’ visibility and figurability that are, by their very nature, co-constructions; one need only think of feelings such as pleasure, empathy as well as, of course, their opposites.

### 3. Facilitating the establishment of collective knowledge

By offering a series of information in a multi-modal way, cinema is able to let different points of view coincide (or clash), thus allowing to reinforce a “critical-reflective” thought in the subjects involved through continuous negotiations. In my opinion this need - which aligns with *filtering* our own systems of beliefs, objectives and intentional states so that the world we live in appears as the result of constant chances of discovery - reconnects to what previously affirmed, hence embracing the idea that the so-called education “effectiveness” is not to be verified or measured in the learning process, but in the ability of the latter to promote practices of reinterpretation and reconstruction of what has been learned<sup>11</sup>. In other words, learning is a process and not a product, and the faculties of medicine should work more and more towards this direction.

From this perspective, the *Archive* wants to configure itself as a space of interaction and communication, that is a methodological device, whose purpose is to sustain the sharing of minds and skills in order to cooperate and learn<sup>12</sup> on a common ground by means of cinema; this is the reason why the choice of the *key words*<sup>13</sup> (useful to “recall” the single scenes uploaded in the database) is constantly verified with the students during lesson, so that they too can “take part” at their definitions (Figure 3).

Through an identification process, the several proposed topics do not aim at letting the users identify themselves with the action of that particular film (a difficult task to accomplish in its entirety, as we deal with single scenes), but their objective is to let them “feel” issues of crucial importance or not for their personal training.



Figure 3. Keywords (Scene).

Hence the *Archive* facilitates a double interpretive movement; on one hand the viewing of specific experiential data, considered significantly important for the training subjects, on the other the verification of that “pertinence” which calls to mind the multiplicity of past experiences every single professional/user has encountered.

### 4. Giving an “educational meaning” to technologies

A final remark. Cinema represents a valid didactical strategy, which has proved effective in the healthcare professionals’ education<sup>14</sup> as well as in their teachers’ training. The planning, organization and implementation of the *Archive*, in the ways I am here briefly discussing, must not ignore that any technological mediation needs to carefully focus on communication, as well as on a very different educational approach which differs from the “traditional” one.

The adoption of the *Archive* makes it clear that in order to use digital technologies in a “conscious” manner should not just be a question of granting physical access or gaining mere procedural skills. It is the cognitive motivations we implement which help us choosing one use over another. It thus seems of crucial importance to rethink teachers training (non just in the academic or faculties of medicine fields) not only to let them acquire essential procedural skills but to rather give an “educational meaning” to the resources offered by technology<sup>15</sup>.

The problem concerning the use of filmic texts arises in all its evidence when the teacher has to select the film or a single scene according to criteria coherent and relevant with the learning goals; if he/she does not have clear in mind the interpretive paradigm which regulates his/her methodological choice, the *Archive* (and cinema itself) risks to appear as a mere catalog, completely losing its educational value; similarly, its access risks to take place without a real significant perception so to position itself in a process oriented upon educational goals of extemporary nature.

What is important to stress repeatedly is that the role of a teacher must not be that of a depository of knowledge to be imposed, but he/she should become “an orientation agent” in a proactive environment where one constantly learns, builds relations, is productive and where knowledge is spread and shared<sup>16</sup>.

In order to ease this procedure, one of the *Archive* functions is to make available documents in pdf format associated with specific scenes (called *didactic*

memory)<sup>17</sup>, significant for the specified topics, i.e. key words. The database ability to “link” single scenes to specific documents, proposed by users (thoughts and remarks by students and professionals, bibliographical quotes, articles, etc.) seems to me quite relevant; it makes the *Archive* a tool able to give back the dynamics of understanding modalities that, we as subjects, activate in the learning process; likewise, it makes available, by means of a continuous training solicitation, experiential accounts so as to verify possible references, influences, comparisons and differences (Figure 4).

Figure 4. Didactic memory.

### Conclusions: future outlook for the establishment of an inter-university Research Network on Cinema and Education

The *Film Archive for Medical Education* surely is an innovative opportunity in the Italian research scenario for healthcare professionals who want to promote forms of collaborative knowledge building.

With regards to the principles and objectives briefly highlighted in the proposed *guidelines*, it appears evident how this technological tool can increasingly become – even through its “duplication” in other faculties of medicine in Italy and abroad – a learning and teaching “place”, and not just a container to be filled or observed. As I highlighted, considering cinema as a way allowing the viewers/users to organize their perception

of events through complex mechanisms of identification – separation/analysis means to promote a reflective and, at the same time, critical thought.

In underlining how the *Archive* has been planned and structured and, although still in its development phase, I wanted to confirm the extraordinary function of evocation and “cognitive dissonance” cinema owns, especially within the faculty of medicine where I have been operating for years.

Therefore, if this performative art, according to its experiences, can embody a didactic strategy, helpful both for training healthcare professionals as well as their teachers, a tool as the *Archive* should, in my opinion, be enhanced. From this perspective, the establishment of an inter-university Research Network moving in this direction (and under the supervision/responsibility of the *Journal of Medicine and Movies* of the University of Salamanca), can clear away the stiff disciplinary settings (which often stand as a closure to interdisciplinary dialogue and hyper-specialization), as well as favour the validation of learning models starting from the inner subject, hence promoting the transformative action of the latter. As I have already stressed, if there is one thing the *Archive* has allowed us to verify during these years, and which would profit even more from an inter-university network, is not so much the relation between education and technologies, as a fruitful debate on the ways the latter can intervene on the learning methods and on the dynamics of cognitive processes.

Reflecting on this, from the author’s point of view, means to foster the theoretical-pedagogical dimension as well as the didactic-methodological one of those who have adopted cinema as their educational tool; also, it means to contribute to the creation of “new” teachers/healthcare professionals, able to promote, through their work, the construction, exchange and negotiation of a wide range of personal, individual and collective knowledge<sup>18</sup>.

Something every faculty of medicine is in dire need of.

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