

● Manuel Gértrudix y Felipe Gértrudix
Madrid & Toledo (Spain)

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The Utility of Musico-visual Formats in Teaching

La utilidad de los formatos de interacción músico-visual en la enseñanza

ABSTRACT

The paper discusses the educational potential of popular culture through the use didactic formats musicovisual interaction in the classroom. It is believed that popular culture, specifically music, is a particularly useful tool for learning. Considered by learning skills, and its current deployment in International educational systems. Especially, its implementation in the education Systems in Europe and Spanish. We live in a technological society, and therefore it is necessary to extend the concept of literacy to digital literacy. Elements of popular culture that are common for young people, such as video clips, should be incorporated. We analyze the competency learning proposals made by the OECD through the DESECO Project or the European framework defined by the recommendation of the European Parliament and Council. These proposals provide a starting point to establish an initial strategy, from the discursive dimension of interaction musicovisual formats, allowing for effective work in the classroom. For this reason, the article evaluates formats musico-visual interaction as teaching aids to serve a critical digital literacy. It also explores some specific contributions to the development of competencies in compulsory Secondary Education. General proposals are made to enable teachers to understand how to use these formats musico-visual interaction in their classroom to work general competencies.

RESUMEN

Desde los presupuestos del aprendizaje por competencias, y su actual implantación en la mayor parte de los sistemas educativos internacionales, el artículo analiza la potencialidad educativa de la cultura popular a través de la utilización didáctica de los formatos de interacción músico-visual en el aula. Se defiende la necesidad de permear el concepto de alfabetización, integrando en el mismo los elementos que conforman el actual escenario de una sociedad digital altamente tecnológica, al tiempo que se recupera e inserta en el discurso de la escuela y en los procesos de aprendizaje que ésta motiva, los productos culturales que forman parte de la vivencia cotidiana de los adolescentes. El análisis de las propuestas de aprendizaje por competencias realizadas, entre otros, por la OCDE a través del Proyecto DESECO o el marco de referencia europeo definido a través de la recomendación del Parlamento y el Consejo Europeo, sirven de punto de partida para establecer una estrategia inicial que, desde la dimensión discursiva de los formatos de interacción músico-visual, permita un trabajo eficaz en el aula. Así, se evalúa la oportunidad que estos formatos de interacción músico-visual, y concretamente los videoclips, ofrecen como medios didácticos al servicio de una alfabetización digital que fomente un espíritu crítico, y se exploran algunas contribuciones concretas que se vislumbran en el desarrollo de competencias generales en Educación Secundaria Obligatoria.

KEY WORDS / PALABRAS CLAVE

Competences, digital literacy, music, videoclips, popular cultura, didactic.
Competencias, alfabetización digital, música, videoclips, cultura popular, didáctica.

◆ Ph.D. Manuel Gértrudix-Barrio, full Professor at the Faculty of Communication of Universidad Rey Juan Carlos in Madrid (Spain) (manuel.gertrudix@urjc.es).

◆ Ph.D. Felipe Gértrudix-Barrio, full Professor at the Escuela Universitaria de Magisterio in Toledo in the Universidad de Castilla La Mancha (felipe.gertrudix@uclm.es).

Introduction:

It is a paradox that schools as an institution have traditionally been resistant to popular culture, to that which has its own tradition. Despite the fact that the products of this folklore have always been part of the daily cultural diet of young people, formal education has been reluctant to embrace this knowledge and integrate it into its educational practices.

Of all the expressions of popular culture, music is especially relevant in the current configuration of this diet. Teenagers enjoy the experience of music intensely through various channels, media and formats. They relish the constant exposure to a flow of sound and music which in recent decades has added the visual to the audio experience. Hence, the video clip has burst onto the scene as an interactive music-visual format, from the paradigms of intertextuality and spectacularization, and has aroused the interest of youngsters. The proliferation of mobile technological devices has extended the reach of this consumption, significantly broadening the time and space young people devote to their consumption.

So, a relevant question is what possibilities are offered by the arrival of music-visual interaction formats, especially video clips, in the processes of formal education; that is, how far, regarding the current concern about educational processes driven by the competence model, can these products of communication help achieve general competence and, in particular, stimulate critical and reflexive thought.

We try to answer some of these questions in this study, making general proposals that cover large areas of competencies as defined by the Organization for Economic Cooperation and Development (OECD). This has required a broad theoretical review that interrelates such disciplines as Pedagogy, Didactics, Communication and Music, among others.

1. The competence as reference framework

The model of competencies structures the design of a significant part of international educational systems today. So, any proposal for action in education must necessarily be framed within this model. It is a reference that has been imposed, and although disputed by certain collectives (Vega Cantor, 2007) who distrust some of the suppositions on which this model is based (competition, efficacy...), it is a reality that makes it an integral part of our educational systems both in pre-university and university education, and has come to transcend the regulatory curricular designs in force in Europe, and consequently in Spain – Organic Law of Educational Planning (2006), Organic Law of

Universities (2007). Notwithstanding antecedents – studies on competencies rooted in the early 70s [(Drummond, 1974), (Walker, 1977)] and widely accepted in the 90s, the starting point was the so-called Lisbon Strategy in 2000, but more so with its reformulation in 2005 – when the European Union, basing itself on reports from the Council and the Commission as well as on the results of different studies like Maastricht (CEDEFOP, 2004), established a series of recommendations to determine a reference framework of general competencies that are transversal and which must be achieved by all students. They emphasized the progressive, iterative nature of learning as something continuous throughout life within multiple open contexts (2006).

Thus, the scope of the term competence was defined as «a combination of knowledge, capabilities and attitudes appropriate to the context», and was framed within a project of personal and collective development that must contribute to «active citizenship, social inclusion and employment» (2006: 394/13). It also emphasizes the critical capabilities needed for analysis, reasoning and communication that must be deployed efficiently when «problems in a variety of areas arise», (OECD, 2005: 2). Definitively, the potentiality of interpreting, confronting and adequately responding to the constant stimuli of a world that is increasingly complex, technological and dynamic.

The research developed by the OECD through the DESECO project (OECD, 2005: 4 and ss.) has prioritized three main areas of competence which are interrelated and form the basis of the proposals we put forward in this text:

a) Instrumental: individuals must have a broad and varied ToolBox which enables them to positively interact with their surroundings, including skills in the use of languages, Information and Communication Technologies, socio-cultural areas..

b) Autonomy: the ability to exercise freedom of action responsibly, to set goals and propositions and set about achieving them, to be responsible for one's own personal development.

c) Interaction: citizens must possess a variety of mechanisms and resources to allow them to freely and spontaneously interact within a highly interrelated social system which is also global and interdependent.

2. The complex processes of literacy in a connected society

We know that we are deep into transformation. And although we don't know what lies ahead, we are certainly aware that these transformations have an

essential impact on the forms of proceeding and understanding, fundamentally because these «affect the nature of the semiotics used, and the dominant contexts of communication» (Pérez Tornero, 2000: 89). The framework of competencies questions the traditional concept of literacy; the dominant linguistic and verbal-written competencies, like structuring agents of the processes of communication, lose ground to multiple, complex systems of social interaction, which is dislocated, multimedia and hypertextual, as numerous authors have pointed out (Pérez Tornero, 2000; Piscitelli, 2002; Marina, 2008; Lankshear & Knobel, 2008).

The young live in an increasingly mediated society that offers them a huge amount of information that grows and overflows; a RAM_culture, as Brea (2008) put it. The murder of the real, as proclaimed by Baudrillard, by a virtualized world that goes beyond reality, saturating it, forces us to face up to the need to understand/attend to literacy in a broader sense in order to respond to the new necessities of knowledge management that confront us. «The excess of information is the end of information, and the excess of communication is the end of communication», Baudrillard reminds us (2002: 57) so, in a reconfiguration of its postulates, it is important for schools to allow the establishment of valid and efficient connections between the pieces on the Borges map inhabited by students and the real references to which the indices of this map point to. In the plethora of the schematic, in the designs of the self-referenced sign, the school must continue to fulfil the objective of rescuing the fragments of the real from the drift. It must broaden the meaning of its action towards a model of all-understand digital literacy, and deepen its action in the environment of an educated society by contextualizing learning and making it significant for that economic spectator presented by Vilches (2001: 40). Advantage needs to be taken of the opportunities that this new reality offers, that «privileged sphere of extension, exuberant and hyperreal (...) That symbolic world plagued with stimuli and sown with signs» (García & Gertrudix, 2009: 19).

The huge amount of information outside the school's orbit causes a continuous shift in the influence

the different educational states have as managers of learning. The school seems to separate itself from the daily flow of knowledge because the society of casual learning is increasingly to the fore. Beyond the mentalities applied to the educational systems, this questions the relevance of the regulated, formalized models of learning as opposed to informal learning (micro-contents, culture snack, multi-scoped singularity, etc). Clearly the school's influence on the construction of learning is waning, as has been indicated over the past two decades. From the call for social descolarization by the Austrian Iván Illich (1985) to the construct of the educational city of Edgar Faure (1973), and to recent movements, like Connectivism, propelled by George Siemens (2005) or expanded education, passing through theories of situated learning, all have shown how the alternative forms of learning are gai-

When the video clip is brought into the classroom, it facilitates the recovery of an element that is part of the everyday life and life experience of the student, and benefits their attention and interest, and identification within the group and social setting, etc. but it also causes the reflection and articulation of a critical examination of the video clip as text and of the pre-eminent meanings and underlying ideology always present in any cultural expression.

ning ground against formal learning as practised at school. It is as stated by Rubén Díaz, of the Zemos98 collective, «education can happen at any time and in any place..., inside or outside school. When we enter school, we enter a culture of silence. Expanding knowledge means passing from the culture of silence to the culture of questioning, and this means entering into the dynamic of libertarian pedagogy» (Various, 2009).

The protean diversity of the panoply of media that makes up the contemporary spectrum of social communication, and the incessant flow of media text that floods our reality offer us a kind of Pandora's Box on to which are often projected all the good and bad of the world via debates whose verticity varies according to the social moment in which they occur. Specifically, the all-enveloping breadth and complexity of this offer requires, as Ortiz Sobrino states, a continuous critical reflection on the role the media plays in the educatio-

nal processes: «audiovisual literacy is an indispensable tool today for forming critical citizens who know how to take advantage of the many possibilities that media communication offers for knowledge, information and entertainment» (2008: 10).

3. Culture and popular music: formats of musico-visual interaction

For centuries, the control of formal knowledge and the formulation of values in the West have been in the hands of certain powers and social classes who marginalized other knowledge that was part of popular culture. Nevertheless exchanges, more or less fluid, have always occurred between these two environments, one feeding off the other, and the original sour-

phenomena fit into this category, such as so-called visual Music, with synesthetic references, audiovisual installations of a space-time nature, or any other audiovisual format. They all have poetic features in common defined by such questions as the nature of the relationship between the visual and sound-musical images – symbiosis, osmosis, synchresis – (Colón, Infante, & Lombardo, 1997: 221-222), or the forms of interaction produced – parallelism (empathetic effect), addiction (added value), neutral addiction (anempathetic effect), opposition - (Román, 2008: 142).

Although these relationships necessarily exist in all audiovisual formats and genres – even prior to those of a technical nature – we are particularly interested here in those which, as various authors point out (Darley, 2002; Sánchez Navarro, 2005), are characterized by a formal style of spectacularization. Specifically, the video clip defines a particularized model of music-visual relationship, in that it vectorizes the music-image relationship to its advantage. This contrasts with what occurs in other audiovisual formats and genres; here, it is the musical structures (melodic, harmonic, textural, rhythmic...)

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ce has often been blurred.

This is obvious in music, for example. Throughout different eras, composers have searched for the essence of their creation in popular melodies, rhythms and sentiment while popular music has adapted and popularized compositions by cultured artists, assimilating them and making them popular. The historic evolution of that game has divided along the lines of educational control by the elites (the institutions, the upper classes, the composers...) and the appropriation by the people «of the nation, of the feeling of social participation embodied in folklore» (Gertrudix, 2009: 17). Strictly speaking, numerous authors have debated the difficulty of establishing levels between both cultures on the basis of hypothetical superiorities. Like everyday life, culture is a resolutely democratic idea (Lull, 1997: 92).

The formats of music-visual interaction group together all those expressions which have been more or less canonically formulated in the past decades, and are textually configured via the additive synergy of the expressive substances of sound and vision into a type of collage. Hence, commercials and video clips represent the nucleus of these proposals although other

that give meaning to the minimal units of discursive articulation (Vernallis, 2004: X).

Studies on video clips have asserted that these are examples of a postmodern aesthetic. With the rejection of the narrative, the insolent games of insinuation and suggestion, the defiant allusion together with a valiant game of hypertextualities have been the features that defined its Poetic: images that «lead to no identification or critical reflection, and which essentially refer to the image itself instead of to a world beyond it» (Sánchez Navarro, 2005: 239). A kind of metagraphic audio and visual which is put together with games of permutation, combination, substitution and addiction, with a decidedly transgressive intentionality on the part of the enunciator; a continued trope in which the synecdoque, the paradox, the irony, the oxymoron fit... and in which the authenticating function of the fictional proclaimed by Dolézel (1999) dilutes and disappears, and which commends the author as narrator in the text.

On the other hand, we cannot forget that the texts that generate these formats are not neutral; they are the reflection of an ideology, of a way of looking at the world, interpreting it, stating a point of view on reality.

They are a substantive element of the commercial process of the contemporary music industry (Viñuela Suárez, 2003) and, therefore, they entail much more than added images and sounds. Behind the frivolous appearance of a video clip, its uninhibited and insignificant nature, Ariadne also weaves her net in order to stimulate complex processes of cultural identification that are globalized today, and which propose normalized cultural contexts to the young in which they can immerse themselves and roam. Thus, listening to music becomes audiovisual consumption, and what's more, in integral hyperconsumption, in which styles, trends, genres, fashions, tendencies are imposed not as personal aesthetic preferences but which play the game of social construction processes; a construction dominated by market forces, and in which learning the rules, values, aesthetics, ways of living and thinking are increasingly controlled by the modern industries of culture that are capable of articulating the «representation in sound of a (complete) cultural universe in movement» (Adell, 2004: 400).

We are dealing with a phenomenon that is not only for adolescents. It spreads right across the entire school age. And we cannot forget that the basic discursive matrix of music models many education media products children are exposed to from an early age. We find examples of this in Cantajuegos series, in various music videos for children in TV programmes such as «Spongebob», «Pocoyo», «La Abeja Maya» or «Los Lunis». That is why it is necessary to train, inform and learn how to use these formats in a critical way. To contribute to that training in media and to use those media by promoting a truly reflexive spirit that enables young people to separate analytically all the layers contained in these media texts.

4. Formats of musico-visual interaction as an instrument for learning

Taking interactive music-visual formats as an audiovisual genre in which, through a static, dynamic or digital screen (Manovich, 2005) we manage the expressive materials of sound and image with a coherent global purpose via a set of stable, uniform resources that are thematic, articulated and rhetorical, we can follow this idea to see it in windows as different and past as those of the Portico de la Gloria of the Cathedral of Santiago de Compostela (the image is seen, the sound is intuited), Berlioz's *Symphonie Fantastique* (music stated, image programmed), *The Jazz Singer* film (image in movement, music recorded) or the first video clip recorded on an iPhone 3G by the artist GOSHone (music and image are digital and interactive)

4.1. Didactic potential

To make the most of the didactic potential of these formats of music-visual interaction, we cannot forget that the systems of digital production and treatment instrumentally condition the way in which reality is treated and constructed, which supposes a bigger challenge for their use in education. The reach of these music-visual interactions spreads, grows and branches off with the emergence of numerical treatment systems in the production of audiovisual discourses. This requires, for example, an act of reflection on what the rate of transformation is that they propose in the traditional concepts of audiovisual representation (Vilches, 2001: 230).

We stand before a new communicative ecosystem into which «emerging audiovisual forms (for example, mobile communication) in consolidation (for example, videogames) or transformation (for example, cinema or television) (Alberich & Roig, 2005: 16) converge, in an intense interrelationship.

When the video clip enters the classroom, it facilitates the recovery of a moment that is present in everyday life and in the living experience of the student, and it contributes to greater attention, interest, identification with group and social sphere, etc. On the other hand, it enables the reflection and articulation of a critical examination of the video clip as text and of the pre-eminent meanings and underlying ideology always present in any cultural expression. Using the video clip as an instrument in the service of learning, we subject it to a process of isolation, a fracturing of the infinite, perpetual discourse that forms its natural ecosystem which makes any reflection impossible within that framework, thus favouring a reasoned and methodical view that can illuminate critical thought. This is so because the school still represents, or at least should do, a privileged space for reflection and analysis.

In the postulates we have established, there clearly exists an opportunity to take advantage of the significance that the interactive music-visual formats have for students as an efficient instrument in the service of media education. Considering that «cultural capital: that is, the necessary cultural skills and competencies to use technology creatively and productively» (Buckingham, 2004: 281) is closely linked to the level, depth and quality of access to such technology and, consequently, to the texts it produces, it is easy to deduce that the students will be very willing and able.

Besides that, digital technology has opened up an unusual range of possibilities for creative learning that is aware and maturing when it makes visible certain

parts of the processes of making media. «Digital manipulation is not simply a more efficient way of doing things...» but, through the very dynamic of repeated interactions with complex feedback from the student, they enable the student to «conceptualize the process more directly and flexibly» (Buckingham, 2004: 284-285).

4.2. The contribution to the development of general competences in Secondary Education

The contribution of the use and treatment of the music-visual interaction formats to the development of competencies is based on three categories in the DESECO (2005) project, namely: instrumental, autonomous and interactive.

Firstly, it needs to be said that a meta-cognition is produced in all teaching-learning processes in which the student develops applicative skills that entail: knowing, knowing what is (from a critical viewpoint), knowing how to do something, and knowing how to be organized in such a way as to be applicable to society (Gertrudix, 2009b). This meta-cognition has its foundations in the four dimensions of competence: conceptual (the cognitive), operational (the functional and social), occupational (the cognitive and functional) and personal (the social and meta-cognitive). The convergence of these competences will lead to the development of a critical view that enables a reflection on the complexity of the automated, operationalized reality in which we move, so that we will be capable of redirecting the traditional functionalities (social, political, virtualized...) that Baudrillard believes are endangered by their use in a purely virtualized world (2002: 56).

But it is not only reflection and critical thought that merit study; media education activities via the music-visual interaction formats can contribute to the development of other competencies in reading, writing and arithmetic, as well as skills in areas like technology, problem solving and research (Buckingham, 2005: 148). In addition, cultural and artistic competence is implicit, where music and image are the bulwark of aesthetic, creative ability.

Musical perception and expression contribute to personal growth, boosting the competencies of autonomy and personal, cultural, artistic, social and civic initiative. Later we will examine some possible channels for achieving student involvement such that the student gains the necessary capabilities to develop competencies by using music-visual interaction formats in the classroom. These skills are directed towards three perspectives:

a) Using tools interactively

Although there is insufficient research to validate the use of this type of technological resource in teaching, it is notable how, once again, constructivist teaching is supported on this type of materials (Gertrudix, 2009: 66). As an example, we can use the Wii music game to make a video clip to work on the development of competences like: a) personal initiative and linguistic communication, the choice of texts, images, sounds and/or music; b) learning to learn, thanks to its practical aspect, from the start of the project through its process to the final product, the video clip; c) treatment of information and digital competence, stated in the very concept of the music-visual interaction format.

On the other hand, it is a fact that music contributes to the development of competencies and, specifically, to those that students must have acquired by the end of compulsory secondary education. If we also take the idea that music is not a type of thing but a type of experience (Dewey, 1934), then uniting music to image will exponentially increase this experience which, in the interactive music-visual formats, is reflected in the visual, audio and tactile: strictly speaking, a global, sensitive stimulation. Music has always had an influential role in the treatment of information and digital competence: a constant paring since the beginning of the time of sound (Gertrudix, 2009a: 39), enriching communicative exchanges, participating in the communion between verbal and musical language, the manipulation and knowledge of the various music-visual formats as well as the praxis in techniques of treating and recording sound and image, all of which enable this competence to make continuous progress.

The school can make the most of the possibilities derived from these music-visual formats, in which students can compose and release their own music, and produce their own video clips without intermediaries, since the output goes from the «creator or interpreter directly to the listener», thanks to computers or mobile phones, which have become devices for listening to music (Roca, 2004: 35).

b) Interaction in heterogeneous groups

One of the methodological strengths in the development of competencies is group work (Recommendation of the European Parliament and Council, 2006). With regard to work processes in the classroom directed towards the development of original video clip proposals, or reformulations of these using remix techniques, it is easy to present collaborative and cooperative strategies that involve the group in achieving common objectives; synergy: a situation in which peo-

ple work in groups to reach common objectives, obtaining better results than if they had worked alone (Stamato, 2008), and increasing creativity and communion (Goleman, Kaufman and Ray, 2000).

Viewing video clips with heterogeneous groups of students oriented along a series of common lines or axes like, for example, specific social, ethical or political aspects, can contribute to social and civic competence understood as an ethical dimension. This facilitates the understanding of the values of the milieu with the aim of assessing and reconstructing them to create their own system of values and the skills to relate to others. So, taking a specific video clip that deals with one of these aspects, the students will search for and contribute new video clips (known to them) linked to the same topics but treated from different viewpoints, and with the aim of noting common elements beyond the mere aesthetic pleasure of the video clip, as well as philosophical, political and social ideas that underlie the narrative discourse.

c) Acting autonomously

We know that music improves order, concentration, memory and analytical capability: this allows us to venture that music enhances this effect through its union with the image in the music-visual formats. At the same time, various learning strategies are faculties that are gestated in music teaching, such as reinforcing mathematical competence, as the psychologists Gardiner (2001), Shaw and Rauscher (1998) have demonstrated by affirming how the auditory processes (semiotic and analytical) collaborate to achieve a cognitive improvement in the mathematical processes. But video clips also put meta-cognitive competencies to work, as in learning to learn.

For example, when students want to reformulate the latest video clip by their favourite group (for instance, in the MTV portal, using an online editing tool), they have to set themselves a reflexive exercise, beyond the basic editing and treatment operations, on what the limits of their knowledge are: what they know, and don't know, and how they can achieve those skills they lack, autonomously and by working in a group.

5. Conclusions

The European reference framework has taken up

the principles of the model of education by competencies and, as a prescriptive standard, has induced its postulates into the educational norms in force in Spain.

It is the model's integrating and transversal nature that lends credibility to this focus; creating its scope from a global dimension that allows the transfer of the vehicular nature of the competencies to convert them into agents of change, into a stimulus for reflexive thought that requires activating «meta-cognitive skills (thinking about thinking), creative skills and the adoption of a critical attitude».

Today this is no mean feat for schools, which must integrate their actions and adjust their steps to the broad framework of an Educative Society that is learning to connect (Siemmens, 2005).

Digital technology has opened up an unusual range of possibilities for creative learning that is aware and maturing when it makes visible certain parts of the processes of making media. «Digital manipulation is not simply a more efficient way of doing things...» but, through the very dynamic of repeated interactions with complex feedback from the student, they enable the student to «conceptualize the process more directly and flexibly».

Media education, how to make learning/teaching a process within the digital sphere, must be substantiated by the effective acquisition of competence by students who are eager to know, know how to do and how to be, and which avoids falling into the trap of making something digital for the sake of it. This assumes going beyond the tools, beyond an instrumental use of the video clip as a didactic resource; we have to configure new methods and strategies to understand and educate with the media and for the media. Paraphrasing Ricardo Fernández, we would have to reflect on whether the use of this type of platforms (music-visual interaction formats) allows us to improve all the usual things or if we can really harness their potential to make new things (Fernández, 2007: 89)

The processes of media literacy must include reading and writing media, and developing critical understanding and active participation. It must equip students' thought with depth and social maturity so that they can acquire, through the use of communication

products relevant to them, an analytical overview that makes them think about the social pressures, economic interests, cultural trends, and the imaginary and ideological worlds on which music-visual interaction formats are supported. Behind every independent viewpoint and responsible action lies a citizen who is free and committed.

Music, with its interrelation with technology and the audiovisual, has given rise to different expressive and discursive models, like the interactive music-visual formats, which have boosted cultural exchange. These models are in fact the reflection of the current cultural hybridization with its pure mix of games, swaps, blurred borders and constant ebb and flow, and at the same time they are symptomatic of a movement away from current music consumption to an appropriation of all-sensitive sound.

Music-visual interaction formats have a didactic dimension. A potential which, if properly treated, is aware of its context, and the cultural, political and socio-economic parameters that define each era (their message), but which also contains a programme for interpreting that message (a code). The contribution of music-visual interaction formats to the development of competencies can be realized through any of the three main areas of competence: the instrumental, the autonomous and the interactive.

References

- ADELL, J.E. (2004). Hip-hop: del Bronx a El Prat, en ARDÈVOL, E. & MUNTAÑOLA, N. (Coords.). *Representación y cultura audiovisual en la sociedad contemporánea*. Barcelona: UOC; 397-418.
- ALBERICH, J.R. (2005). Presentación, en ALBERICH, J. & ROIG, A. (Coords.). *Comunicación audiovisual digital. Nuevos medios, nuevos usos, nuevas formas*. Barcelona: UOC; 15-19.
- BAUDRILLARD, J. (2002). *La ilusión vital*. Madrid: Siglo XXI.
- BUCKINGHAM, D. (2004). *Educación en medios. Alfabetización, aprendizaje y cultura contemporánea*. Barcelona: Paidós.
- COLÓN, C.; INFANTE, F. & LOMBARDO, M. (1997). *Historia y teoría de la música en el cine. Presencias afectivas*. Sevilla: Alfar.
- DARLEY, A. (2002). *Cultura visual digital. Espectáculo y nuevos géneros en los medios de comunicación*. Barcelona: Paidós.
- DEWEY, J. (1934). *Art as Experience*. Perigree Paperback.
- DOLÉZEL, L. (1999). *Heterocósmica: ficción y mundos posibles*. Madrid: ArcoLibros.
- FERNÁNDEZ MUÑOZ, R. (2007). Experiencias de aprendizaje colaborativo en la formación de futuros maestros a través de entornos virtuales. *Revista Latinoamericana de Tecnología Educativa*, 6 (2); 77-90. (<http://campusvirtual.unex.es/cala/editio/>) (05-09-09).
- FONTCUBERTA, M. (2005). Hacia un currículum iberoamericano de educación en comunicación. *Comunicar*, 24; 10-12.
- GARCÍA, F. & GERTRUDIX, M. (2009). El Mare Nostrum Digital. Mito, ideología y realidad de un imaginario socio-técnico, *Icono14*, (www.icono14.net/monografico/mare-nostrum-digital) (12-09-09).
- GARDINER, M.F. (2001). Music, learning, and behavior: a case for mental stretching. *Journal for Learning Through Music*, 1. New England Conservatory of Music; 72-93.
- GERTRUDIX, F. (2009a). Las TIC al servicio de la educación musical. *Actas AI: SIC Imágenes y cultura en los medios de comunicación*; 25-35. Madrid: Icono14.
- GERTRUDIX, F. (2009b). Soy un nativo digital y aprendo en la Red. Internet como espacio de adquisición de competencias. *Icono 14*, 12; 54-72. (www.icono14.net/monografico/internet-espacio-de-adquisicion-de-competencias) (12-09-09).
- GERTRUDIX, M. (2003). La pantalla ante el espejo. *Luces en el Laberinto Audiovisual. Congreso Iberoamericano de Comunicación y Educación*. Huelva: Grupo Comunicar; 204-207.
- GERTRUDIX, M. (2009). La música como objeto cultural de red, en *Actas nº AI: SIC: Imágenes y Cultura en los Medios de Comunicación*. Madrid: Icono 14; 15-24.
- GOLEMAN, D.; KAUFMAN, P. & RAY, M. (2000). *El espíritu creativo*. Barcelona: Vergara.
- ILLICH, I. (1985). *La sociedad desescolarizada*. México: Joaquín Mortiz-Planeta.
- LANKSHEAR, C. & KNOBEL, M. (2008). *Nuevos alfabetismos. Su práctica cotidiana y el aprendizaje en el aula*. Madrid: Morata.
- LULL, J. (1997). *Medios, comunicación y cultura. Aproximación global*. Buenos Aires: Amorrortu.
- MANOVICH, L. (2005). *El lenguaje de los nuevos medios de comunicación. La imagen en la era digital*. Barcelona: Paidós.
- MARINA, J.A. (2008). *Movilización educativa.net*. (www.movilizacioneducativa.net/index.asp) (17-08-09).
- OCDE. (2005). *La definición y selección de competencias clave. Resumen ejecutivo*. (www.deseco.admin.ch/bfs/deseco/en/index-03/02.parsys.78532.downloadList.94248.DownloadFile.tmp/2005.dscexecutivesummary.sp.pdf) (17-08-09).
- ORTIZ, M.A. (2008). Educar la mirada en la «sociedad multipantalla». *Comunicar*, 31; 10-13.
- PISCITELLI, A. (2002). *Meta-Cultura*. Buenos Aires: La Crujía.
- RAUSCHER, F. & SHAW, G. (1997). Studies in the Very Young, en *Neurological Research*.
- RECOMENDACIÓN DEL PARLAMENTO EUROPEO Y DEL CONSEJO de 18 de diciembre de 2006 sobre las competencias clave para el aprendizaje permanente (30-12-06). (http://eur-lex.europa.eu/LexUriServ/site/es/oj/2006/l_394/l_39420061230es00100018.pdf) (18-08-09).
- ROCA, F. (2004). Creatividad y comunicación musical desde las nuevas tecnologías. *Comunicar*, 23; 17-23.
- ROMÁN, A. (2008). *El lenguaje musical: semiótica y estética de la música cinematográfica*. Madrid: Bubok.
- SÁNCHEZ NAVARRO, J. (2005). Nuevas formas en la narración audiovisual, en ALBERICH, J. & ROIG, A. (Eds.). *Comunicación audiovisual digital. Nuevos medios, nuevos usos, nuevas formas*. Barcelona: UOC; 227-248.
- SIEMMENS, G. (2005). *Connectivism: Networked and social learning*. (www.connectivism.ca) (14-08-09)
- STAMATO, A. (2008). *Cómo armar un equipo de trabajo eficiente con personas que tienen puntos de vista diferentes*. (www.degerencia.com/articulo/como_armar_un_equipo_de_trabajo_eficiente) (15-09-09)
- VEGA, R. (2007). *Las competencias educativas y el darwinismo pedagógico*. AMEC (<http://amec.wordpress.com/documentos/convergencia-europea/las-competencias-educativas-y-el-darwinismo-pedagogico>) (16-09-09).
- VERNALLIS, C. (2004). *Context, Experiencing Music Video: Aesthetics and Cultural*. New York: Columbia University Press.
- VILCHES, L. (2001). *La migración digital*. Barcelona: Gedisa.
- VIÑUELA, E. (2003). El videoclip como producto de la interacción

con otros géneros y medios audiovisuales y lingüísticos. *Revista de la Facultad de Filología*, 52-53; 539-550.

VARIOS (2009). Educación Expandida. *Zemos 98*, 11ª edición. (www.zemos98.org/spip.php) (19-08-09).