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Highly qualified students? Research into the media competence level of Spanish youth

¿Jóvenes sobradamente preparados? Investigación sobre el grado de competencia mediática de los jóvenes en España

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ABSTRACT: The article presents results of the media competence of Spanish youth. The methodological tool used, a sociological survey, was created from proposals by more than 50 recognized experts in this field. It is focused on six major dimensions: languages, technologies, interaction processes, production and diffusion processes, aesthetics and ideology and values.

The study population is 1,430 youngsters. The results are significant: Spanish youth score poorly in five of the six dimensions, the exception being the technology dimension.

RESUMEN: *El artículo ofrece resultados de la investigación sobre la competencia mediática de los jóvenes españoles. La herramienta metodológica utilizada, la encuesta sociológica, fue creada a partir de una definición de dimensiones e indicadores de la competencia mediática, definición elaborada previa consulta a más de 50 reconocidos expertos del ámbito iberoamericano y que gira en torno a seis dimensiones: lenguajes, tecnologías, procesos de interacción, procesos de producción y difusión, estética e ideología y valores. La población de estudio estuvo constituida por 1.430 jóvenes. Los resultados son significativos: los jóvenes españoles obtienen muy baja puntuación en cuestiones relativas a cinco de las seis dimensiones. La dimensión tecnológica es la excepción.*

Keywords: Youth, media competence, media education, technology, critical attitude, aesthetics.

Palabras clave: jóvenes, competencia mediática, educación mediática, tecnología, actitud crítica, estética.

1. Introduction: youth media education

The terms digital natives and digital immigrants, as coined by Prensky¹, have been in use for over a decade. Digital natives are people under 30 who have grown up with technology and operate naturally and innately in the technological and digital environment. Digital immigrants are people who were not born into this environment and have therefore established a late relationship with technology, consequently living in a constant process of adaptation².

These terms have often been adopted from an excessively optimistic perspective; the interpretation being that the mere fact of being a digital native guarantees the holding of the skills required to operate efficiently in the communication environment. This view is also framed within an instrumental conception of technology and is, therefore, very reductionist. In order to be wholly proficient in the media environment training is required that encompasses the various perspectives involved in the relationship between the person and the communication environment. With this in mind, several authors have analysed the relationships digital natives establish with technology³. These are indispensable studies but the research boundaries need to be broadened; they need to go beyond the technological environment and look at the entire communication environment.

To define the educational shortcomings in this area and establish learning strategies that might address these failings, studies are needed that investigate whether young people have been trained

¹ PRENSKY, Marc, *Digital natives, digital immigrants*, On the Horizon, MCB University Press 9 (5), 2001.

² PRENSKY, Marc, *op. cit.*; PISCITELLI, Alejandro, *Nativos digitales: Dieta cognitiva, inteligencia colectiva y arquitecturas de la participación*, Buenos Aires, Santillana, 2009; GARCÍA, Felipe, *et al.*, "Nativos digitales y modelos de aprendizaje", *Actas IV Simposio Pluridisciplinar Sobre Diseño, Evaluación, y Desarrollo De Contenidos Educativos Reutilizables*, Bilbao, Setiembre 2007.

³ Cfr. GARCÍA, Francisco and ROSADO, María Jesús, "Conductas sociocomunicativas de los nativos digitales y los jóvenes en la web 2.0", *Comunicación y Sociedad*, vol. XXV, nº 1, 2012, pp.15-38; GUTIÉRREZ, Alfonso, PALACIO, Andrés and TORREGO, Luis, "Tribus digitales en las aulas universitarias", *Comunicar*, vol. XVII, nº 34, Marzo 2010, pp. 173-181.

in the media in a way that would enable them to analyse critically the messages they receive and make a committed and responsible use of technology.

Research has been ongoing in this regard for several years in the international arena: in Canada through experiences such as Media Smart⁴, in New Zealand through the work being undertaken there by the Mediascape research centre, also in Australia, through training and research by the Australian Council on Children and the Media⁵, among others. In the United Kingdom, works by Masterman and the British Film Institute⁶ are crucial. Also in the United Kingdom, Bazalgette and Buckingham have led international research projects that had significant impact, such as «Children's Media Culture: Education, Entertainment and the Public Sphere (ESRC), Pokemon and Children's Global Culture». Meanwhile, in Sweden, work by Von Feilitzen and Carlson, in The UNESCO International Clearinghouse on Children and Violence on the Screen⁷ has also been primordial. In Belgium too, there are studies by Media Animation⁸ and Clarembeaux at the Centre Audiovisuel de Liège⁹ and by De Smedt at the University of Louvain. In France, studies by Jacquinot (Université Paris III) and Gonnet and Bevort, these latter as part of the CLEMI (Centre de liaison d'éducation et de moyens d'information)¹⁰, have been intrinsically important for over 20 years. In Portugal too, Reia (Centro de Investigações em Comunicação e Artes da Universidade do Algarve), Pinto and Pereira from the University of Minho and Ponte from the Universidade Nova in Lisbon, with their respective research works, are also meticulous reference points in this subject. Lastly, in Italy, work by Rivoltella at the Universidad Católica in Milan is of equal importance.

We see, therefore, that there are an increasing number of studies concerned with media education of young people and of society in general. In Spain, a pioneering initiative was carried out in this field from 2005 to 2010. The Catalan Audiovisual Council (CAC) and the Ministry for Education financed research entitled *Media Competence: research into the level of competence of citizens in Spain* (2011)¹¹, a study that prompted various publications¹².

The study, which was coordinated from the Pompeu Fabra University and in which 17 universities participated from each of the autonomous communities in Spain, aimed to assess the level of competence in audiovisual material of Spanish citizens through different methodological tools and quantitative and qualitative analysis.

This research first of all required the defining of the dimensions and indicators that comprise media education. A comprehensive group of experts from Spain and abroad participated in drawing up this document. When the dimensions and indicators had been defined, 6,626 surveys were handed out and 31 in-depth interviews were held, along with 28 focus groups. The sample was stratified by age, gender and level of education.

The research departed from the notion that media competence of citizens needs to be assessed in order to pinpoint any weak points in the area. "You could say it is a vicious circle: media education competences are not assessed because these competences are not taught. But, meanwhile, they are

⁴ <http://mediasmarts.ca/> (13/06/2013).

⁵ <http://childrenandmedia.org.au/research/current-research/> (13/06/2013).

⁶ <http://www.bfi.org.uk/> (13/06/2013).

⁷ http://portal.unesco.org/education/en/ev.phpURL_ID=17529%26URL_DO=DO_TOPIC%26URL_SECTION=201.html (13/06/2013).

⁸ <http://www.media-animation.be/> (13/06/2013).

⁹ <http://www.cavliege.be/> (13/06/2013).

¹⁰ <http://www.cleml.org/> (13/06/2013).

¹¹ Published online at http://ntic.educacion.es/w3/competencia_mediatica/ (27/02/2013)

¹² Cfr. AGUADED-GÓMEZ, Ignacio, *et al.*, El grado de competencia mediática en la ciudadanía andaluza, *Grupo Comunicar y Universidad de Huelva*, Huelva, 2011; FERRÉS, Joan and SANTIBÁÑEZ, Josefina, *Informe de investigación Competencia mediática. Investigación sobre el grado de competencia de la ciudadanía en la Comunidad Autónoma de La Rioja*, Grupo Comunicar y Universidad de La Rioja, Huelva, 2011; FERRÉS, Joan, AGUADED-GÓMEZ, Ignacio and GARCÍA-MATILLA, Agustín, "La competencia mediática de la ciudadanía española: dificultades y retos", *Icono* 14, 10(3), 2012, pp. 23-42, DOI: 10.7195/ri14.v10i3.201.

probably not taught because as they are not assessed, there is no awareness of the shortcomings in this field”¹³.

This article focuses on the results obtained in the age bracket of young people between 16 and 24. Quantitative data are provided from the survey taken by these young people. The investigation aims to find out whether Spanish youth’s screen-time behaviour is mature, active and responsible as the media strive harder and harder to capture young people as their target audiences.

This research is currently being complemented by an R&D project by the Spanish Ministry for Economy and Competitiveness, key code: EDU2010-21395-C03, entitled *Media competence in a digital environment. Diagnosis of requirements in three social areas*. The three social environments broached are: communication professionals, compulsory education and university education.

2. From technological changes to educational changes: the need for media education

Changes in technology in recent years have led to a profound transformation in the way we produce, transmit and receive information. These changes create a fresh communication backdrop that, according to Joan Ferrés (2011), implies the emergence of new concepts, such as *multimodal communication or multimedia communication*, which prompts new representation systems.

Changes require educational shifts. If education does not wish to remain isolated from reality, it must confront social transformations and undergo constant reassessment.

“These changes require new technical and interpretation skills for creating and accessing knowledge, as well as expertise in new symbol systems. The integration of texts, sounds and images in multimedia documents, along with interactivity, make this a special language that forces us to consider now a «multimedia», «digital» or «media» alphabet, which might be a prerequisite nowadays, but will become unavoidable in the near future”¹⁴.

As Gutiérrez states, media literacy is an obligation that cannot be ignored. Yet up till now this obligation had been granted scant attention by formal educational institutions, as demonstrated by its lack of content in school curricula, study or teaching plans, etc.

The education system still does not offer media education to citizens while reluctance can even be noted by formal education to introduce it into its curricula. The education system might have incorporated technological tools in the classroom, filling them with computers, digital boards, etc., whereby education is provided using an increasing amount of media, but there is no actual education about the media –they have yet to become an object of study. “To the contrary of natural assumption, digital or multimedia competence does not entail audiovisual competence. In fact, quite often, it serves to hide incompetence in this subject”¹⁵.

Yet there are forward-looking actions in this field that are encouraging changes to the education structure –changes aimed at teaching media literacy to society. The UNESCO, from the end of the last century, has emerged as a pioneer, through its various conferences and manifestos, such as the Declaration of Grünwald¹⁶ (1982), which set out the obligation of the education system to promote critical competence of society in the communications field. Likewise, the Media Education Seminar

¹³ Cfr. FERRÉS, Joan, “La transformación del paisaje comunicativo”, *Lenguajes y Textos. Revista de la Sociedad Española de Didáctica de la Lengua y la Literatura*, nº 34, December 2011, p. 11/ pp. 9-15.

¹⁴ GUTIÉRREZ, Alfonso, “Creación multimedia y alfabetización en la era digital”, in APARICI, Roberto (coord.), *Educomunicación: más allá del 2.0*, Gedisa, Barcelona, 2010, p. 172/ pp. 171-185.

¹⁵ FERRÉS, Joan, “La educación en comunicación audiovisual en la era digital”, *Quaderns del CAC*, nº 25, May-August 2006, p. 5/ pp. 5-8.

¹⁶ Online at http://www.unesco.org/education/nfsunesco/pdf/MEDIA_S.PDF (27/02/2013).

in Seville¹⁷ (2002), the Paris Agenda¹⁸ (2007) and the Braga Declaration¹⁹ (2011), among others. Organizations such as the European Parliament and Commission and the Council of Europe have also backed these initiatives and promoted the creation of common action methodology²⁰.

In Spain, various inaugural activities have been performed, especially in Catalonia, where the CAC (Catalan Audiovisual Council), in 2003 published the *White paper: education in the audiovisual environment*²¹. This paper aimed to respond to concerns by individuals, groups and institutions about education, audiovisual media and youth. The *White Paper* was written in reference to media education in Spain. In 2006 the CAC also published the Journal entitled *Education in audiovisual communication*, in which Joan Ferrés defines the concept of media education and makes an articulated proposal of dimensions and indicators further to extensive consultation of experts in the subject²².

The proliferation of research and initiatives related to media education over the last decade demonstrates the importance it is acquiring nowadays and the need to continue developing this field of study.

3. Children and young people in the spotlight

The need to focus on children and young people in this area is particularly relevant. Social concern for these groups has been demonstrated through legislation. The General Audiovisual Communications Act in Spain²³, of 31 March 2010, originated with the objective of formalizing and regulating the audiovisual arena, in view of the changes it has undergone. Chapter 1, referring to public rights, contains articles devoted to the right to receive plural audiovisual communication, to the right to cultural and linguistic diversity, to a transparent audiovisual communication, to participation in content control, etc. Article 7 is devoted to the rights of minors and here it specifies that *it is prohibited to openly issue audiovisual content that may seriously harm the physical, mental or moral development of minors, and in particular programmes that include scenes of pornography or gratuitous violence*. The law also takes a stance on commercial communications, which *should not cause moral or physical harm to minors*. Thus, there is obvious concern about the content offered by the media and special attention is paid to the protection of minors, considered here to be the most vulnerable sector of society in terms of the media.

Although the law backs this concern to protect minors, it is not easy to actually monitor them. Obviously there is apprehension about the messages a minor might receive from the media but it is also evident that controlling them is complex. Nevertheless, it is not just protective measures that are necessary; educational measures are required too. Children should not just be protected. They should also be given the skills necessary to interact with the media in a mature and autonomous manner. This is what media education should comprise.

¹⁷ Online at http://portal.unesco.org/ci/en/ev.php-URL_ID=5680&URL_DO=DO_TOPIC&URL_SECTION=201.html (27/02/2013).

¹⁸ Online at http://www.diplomatie.gouv.fr/fr/IMG/pdf/Parisagendafr_en.pdf (27/02/2013).

¹⁹ Online at <http://www.cca.eca.usp.br/noticia/756> (27/02/2013).

²⁰ The European Parliament and Commission have set up a group of experts in media literacy (2006).

²¹ *The White paper: Education in the audiovisual environment* can be consulted online at the CAC website: <http://www.cac.cat/web/recerca/quaderns/hemeroteca/detall.jsp?NDg%3D&MQ%3D%3D&Jyc%3D&MTM%3D> (03/05/2012).

²² The CAC journal on *Education in audiovisual communications* can be consulted online at the CAC website: <http://www.cac.cat/web/recerca/quaderns/hemeroteca/detall.jsp?NDg%3D&MQ%3D%3D&Jyc%3D&MTQ%3D> (03/05/2012).

²³ General Act 7/2010, of 31 March, for Audiovisual Communications. *Official State Gazette*, 1 April 2010, n° 79, pp. 30.157-30.209, available at: <http://www.boe.es/boe/dias/2010/04/01/pdfs/BOE-A-2010-5292.pdf> (27/02/2013).

Similarly, Act 8/1995, of 27 July²⁴, for the care and protection of children and adolescents, highlights the importance of the media in fostering educational objectives and evading messages that might harm the physical, mental or moral development of children and adolescents. In this case, the law does not only focus on minors, but also on young adults. This extension from minors to young people is significant as it demonstrates that media messages can have an impact on the whole population. Children and young adults are the most lacking in tools with which to confront the media, as a result of the era in which they live, but we are all susceptible to the impact of the media. This is why media education is important for society as a whole. “In our society today, much more so than in the society in which Freinet’s primordial systems were formed, the mass media has a powerful influence on the forming of opinions, values and attitudes. What educator does not express his/her concern for the pressure they exert and is anxious to see processes implanted that would train the critical attitude of receivers?”²⁵

All these initiatives underpin the importance of media education for society, which is essential for it to adapt to current technological and social changes. Bearing in mind the interest that laws and society dedicate to children and young people, it must surely be as important to focus on the competences they should acquire.

4. *Clarifying concepts: the terminology discussion.*

In recent years discussions have taken place about the importance of a new literacy concept that would allocate a space to the media for greater and better media education. According to the Spanish Royal Academy dictionary, literacy signifies “being able to read and write”. However, the Catalan Language dictionary defines literacy as “teaching to read and write or educating”. Although current definitions are still grounded in the past, the concept has evolved over time. “Its merely instrumental nature of reading and writing has been overtaken, to consider its individual and social implications, and the ultimate goal of literacy and its influence on the transformation of the models of society”²⁶. Having come this far, it is obvious that the evolution of the concept of literacy has become a necessary field of investigation for society. Discrepancies arise regarding the kind of literacy and how to implement it.

For over a decade, different authors have made their contributions to this field and their proposals have become reference points. The concept of «Multiliteracy»²⁷, «Information literacy»²⁸, «New literacies»²⁹, «Digital literacy»³⁰ and «multiple literacies»³¹, as examples, are some of the concepts arising from the need for an evolution of the traditional concept of «literacy».

²⁴ Act 8/1995, of 27 July, for the care and protection of children and young people and modification of Act 37/1991, of 30 December, on protection measures for children in need and in adoption. DO. Catalan Regional Government 2 August 1995, n° 2083, p. 5.773; State Gazette 30 August 1995, n° 207, p. 26.613.

²⁵ KAPLÚN, Mario, “Una pedagogía de la comunicación”, in APARICI, Roberto (coord.), *Educomunicación: más allá del 2.0*, Gedisa, Barcelona, 2010, pp. 59-60/ pp. 41-61.

²⁶ GUTIÉRREZ, Alfonso, *op. cit.*, p. 173

²⁷ COPE, Bill and KALANTZIS, Mary, “Multialfabetización: Nuevas alfabetizaciones, nuevas formas de aprendizaje”, *Boletín De La Asociación Andaluza de Bibliotecarios* 25 (98-99), Enero-Julio 2010, pp. 53-91.

²⁸ BAWDEN, David, “Revisión de los conceptos de alfabetización informacional y alfabetización digital”, *Anales de documentación*, n° 5, 2002, pp. 261-408.

²⁹ JENKINS, Henry, et al., *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*, MacArthur Foundation, 2006, pp. 68.

³⁰ BAWDEN, David, *op. cit.*

³¹ AMALIA, Gabriela, “Las alfabetizaciones múltiples como eje de la formación docente”, *Razón y Palabra*, vol.XIII, n° 63, Julio-Agosto 2008.

At present, approaches to literacy tend to focus on the new media, leaving aside to a certain degree traditional media, such as the case of Area and Pessoa³², who propose, employing Bauman's liquid society metaphor, a literacy model focused on Web 2.0. "Digital is a liquid experience highly differentiated from the experience of consumption and acquisition of the solid culture and, as a result, requires fresh literacy and learning focuses and models"³³.

Yet, faced with the maelstrom of terms, Kendall and Mc Dougall, quoting Buckingham, state that "at the moment there is an urgent need to prepare arguments and focus energies, confronted by the risk that media literacy might become dispersed in a fog of technological rhetoric. Another potential risk is that of falling into extreme, generalized and poorly defined ambiguity; something resembling a set of good intentions, but one that is insufficient in practice"³⁴. These authors, reflecting Buckingham's arguments, defend the fact that these and other related approaches are serving "to weaken, through diverse but associated procedures, the potential of media literacy as a form of critical reflection. In their place, they applaud technology, text modes and calls for democratization with an absence of critical attitude, while educational response is reduced to a series of competences and dexterities"³⁵.

Thus, we depart from the conviction that the debate on terminology should be transcended to reach an agreement on the content on which to work in media education in order for society to gain competence. This competence needs to undergo consistent reformulation, within the framework of a society that is also under constant transformation, without losing sight of the need to encourage critical thought and the aesthetic sensitivity of the population, particularly with regard to children and young adults. In short, tackling the concept of *media education* requires the development of the concept of *media competence* and definition of its *dimensions and indicators*³⁶.

5. Media competence: dimensions and indicators

The concept of competence, developed principally in the business sector, has been linked over time to academia and is now considered a key point in the educational reforms of the European Union. This introduction into education is based on the European Space of Higher Education (EEES). Despite this, it is important to remember that the term competence has also been associated with disciplines such as Greek philosophy, linguistics, via Chomsky, modern philosophy and sociology³⁷. It is not, therefore, a concept arising solely from the world of work.

The discussion on the advantages and disadvantages of introducing it into the education sector is on the agenda³⁸, even though it has already been introduced into the field. "Competence-based

³² AREA, Manuel and PESSOA, Maria Teresa, "De lo sólido a lo líquido: Las nuevas alfabetizaciones ante los cambios culturales de la web 2.0", *Comunicar*, vol. XIX, nº 38, Marzo 2012, pp. 13-20.

³³ AREA, Manuel and PESSOA, Maria Teresa, "De lo sólido a lo líquido: Las nuevas alfabetizaciones ante los cambios culturales de la web 2.0", *Comunicar*, vol. XIX, nº 38, March 2012, p. 14/ pp. 13-20

³⁴ KENDALL, Alex and MC DOUGALL, Julian, "Alfabetización mediática crítica en la postmodernidad", *Comunicar*, vol. XIX, nº 38, March 2012, p. 22/ pp. 21-29 (DOI: 10.3916/C38-2012-02-02).

³⁵ KENDALL, Alex and MC DOUGALL, *op. cit.*, p. 22.

³⁶ FERRÉS, Joan and PISCITELLI, Alejandro, "La competencia mediática: propuesta articulada de dimensiones e indicadores", *Comunicar*, vol. XIX, nº 38, Marzo 2012, pp. 75-82.

³⁷ Cfr. FERNÁNDEZ-SALINERO, Carolina, "Las competencias en el marco de la convergencia europea: Un nuevo concepto para el diseño de programas educativos", *Encounters on Education*, vol. 7, 2006, pp. 131-153.

³⁸ Cfr. DE KETEKE, Jean-Marie, "Enfoque socio-histórico de las competencias en la enseñanza", *Profesorado. Revista De Currículum y Formación De Profesorado* (3), 2008, pp. 1-12; TOBÓN, Sergio, "El enfoque complejo de las competencias y el diseño curricular por ciclos propedéuticos", *Acción Pedagógica*, nº 16, Enero-Diciembre, 2007, pp. 14-28; COLL, César, "Las competencias en la educación escolar: Algo más que una moda y mucho menos que un remedio", *Aula De Innovación Educativa*, nº 161, 2007, pp. 34-39.

education and training have experienced an unusual boom throughout the world, particularly in countries keen to provide young people with a relevant, effective and efficient education”³⁹.

Developing competences in audiovisual communication has now become universal, and international organizations are offering increasingly updated resources in media education. The UN Alliance of Civilizations with an online information centre, the UNESCO, that recommends the empowerment of people through media literacy and the European Commission (EU) in its *Recommendations on media literacy in the digital environment for an audiovisual and increasingly competitive content industry and knowledge society* (2009) are some examples.

Many researchers have made proposals regarding the assessment of media competence levels (audiovisual and digital) such as the research we present here. The document is based on this research: *Competence in audiovisual communication: a comprehensive proposal of dimensions and indicators*⁴⁰, coordinated by Joan Ferrés, which includes an approach to the concept of Audiovisual Competence, defined as the “capacity of an individual to interpret and analyse audiovisual images and messages through critical reflection and to express him/herself with minimum correction in the communication environment. This competence is related to media knowledge and a basic use of the multimedia technology required to present it”⁴¹. The document, which was subsequently updated by Ferrés and Piscitelli, resulted from observations and suggestions by 46 experts in the subject in the Latin American environment and was later consolidated by 14 experts in Spain. The document states that “media competence consists of a command of knowledge, skills and attitudes linked to six basic dimensions, offered by the main indicators. These indicators are related, as appropriate, to a participation environment of people who receive messages and interact with them (area of analysis) and people who produce messages (area of expression)”⁴². The dimensions refer to each dimension that defines the phenomenon of the competence and the indicators specify these dimensions. The six basic dimensions comprised by competence in media education are Language, Technology, Interaction processes, Production and Diffusion processes, Ideology and Values and Aesthetics. Each has a series of principal indicators. For greater contextualization we provide below a brief description of each dimension:

Table 1. Description of Dimensions that comprise Media Competence

Dimension	Description
Languages	Knowledge of language codes, the ability to use them and to analyse written and audiovisual messages from the perspective of sense and significance, from narrative structures and from categories and genres.
Technology	Knowledge and ability to use tools that make written and audiovisual communication possible to understand how messages are produced. Understanding of the role that ICTs play in society.
Interaction processes	Capacity to evaluate, select, review and self-assess the media diet itself. Also, the ability to critically assess cognitive, rational, emotional and contextual elements involved in its receipt.
Production and diffusion processes	Knowledge of the functions and tasks of the production agents, the production and diffusion process phases and regulatory codes. Capacity to write, select, share and disseminate media messages.
Ideology and values	Capacity for comprehensive and critical reading, critical analysis and selection of media messages, in terms of representation of reality.
Aesthetics	Ability and awareness to analyse assess and extract pleasure from media messages from an aesthetic quality perspective. Also, the capacity to produce messages that contribute to

³⁹ AGUERRONDO, Inés, “Conocimiento complejo y competencias educativas”, IBE/UNESCO Working Papers on Curriculum Issues, nº 8, Switzerland, 2009, p. 7.

⁴⁰ FERRÉS, Joan, “La competencia en comunicación audiovisual: propuesta articulada de dimensiones e indicadores”, *Quaderns del CAC*, nº 25, Mayo-Agosto 2006.

⁴¹ FERRÉS, Joan, “La competencia en comunicación audiovisual...”, pp. 9-17.

⁴² FERRÉS, J. and PISCITELLI, A., *op. cit.*

increasing levels of creativity, originality and sensitivity.

Source: compiled by authors.

These documents form part of the working programme of the European Union *Education and Training 2010*, within the working group entitled *key competences for lifelong learning. A European reference framework* (2007).

6. Media competence in Spanish youth

This work aims to measure the degree of youth media competence based on the dimensions and indicators defined by Ferrés⁴³. The results will be used to accentuate the need for media education.

6.1. Methodology and sample study

A quantitative methodology was used, based on descriptive survey. After defining the dimensions and indicators, a questionnaire was drawn up as the assessment tool. It was developed by lecturers in 17 universities corresponding to each of the 17 autonomous communities, through in-class and online work. The questionnaire contains different types of questions: identification, dichotomous, multiple choice answers, questions with scaled responses and open questions.

The completed questionnaire underwent several pilot tests in different autonomous communities. Francesc Martínez (UB), an expert in quantitative methodology, subjected the questionnaire to reliability and validation studies. The reliability study (with a Cronbach's alpha value of 0.77 in the definitive version of the questionnaire knowledge test) provided sufficiently positive results for the whole tool, albeit with a certain complexity concerning specific dimensions, such as aesthetics, which was treated with a single open question. However, it was decided to maintain the structure of the dimensions as it forms the basis of the research, with the understanding that the results of each of the dimensions cannot be generalized. Subsequently, the questions were closed and the survey was handed out.

The surveys were given out in-class, as the sample individuals had to respond to some of the questions after watching videos. The data were subsequently processed in a database of the *Statistical Package for the Social Sciences* (SPSS) program. A univariant and bivariate analysis was carried out, adopting the value 0.05 as the significant level. The univariate analysis was performed using descriptive statistics resources such as frequency tables and summary statistics. The bivariate analysis was performed through contingency tables, using the chi-square test and the Mann-Whitney and Kruskal-Wallis nonparametric tests in cases when the dependency variable distribution was not normal.⁴⁴

The study population was made up of 1,430 young people aged between 16 and 24 from the 17 autonomous communities in Spain. A non-probability quota sampling technique was applied. The quotas considered were first the autonomous community and within each community the gender, age and level of education according to population data obtained from the National Statistics Institute. The questionnaires were applied to clusters selected by casual sampling to aid and speed up the information collection process. In cases when quotas considered were not met, a second

⁴³ FERRÉS, J. and PISCITELLI, A., *op.*, *cit.*

⁴⁴ In the case of the Kruskal-Wallis test the Bonferroni correction had to be applied *post-hoc*.

casual sampling by individuals phase was applied to reach the quota. The field work was carried out from 1 February 2009 to 10 March 2010.

In each of the autonomous communities finance for the fieldwork was sought from the community itself. This meant that in some communities there was a greater proportional sampling in order to be able to publish statistically reliable results of the community. The results had to be weighted in autonomous communities where more questionnaires than corresponded were handed out.

7. Results

7.1. Sample description

Regarding gender, the percentage of women (57.9%; N=829) is slightly higher than that of men (52.1%; N=601). The level of education is distributed more unevenly: 0.8% (N=12) of those surveyed were uneducated, 13.7% (N=196) had primary education, 50.6% (N=724) secondary education and 34.9% (N=498) university education. Lastly, the data on audiovisual communication training received were interesting. Discarding the percentage of lost cases, which were those that did not answer, 44.8% (N=635) state that they had received no training, 31.3% (N=444) some, 12.4% (N=175) quite a lot and 11.6% (N=164) a lot. It is significant to note that 55.3% (N=783) of those surveyed state they have received some training in audiovisual communication, as this does not form part of the school curriculum for compulsory schooling.

7.2. Media Competence Dimensions and Indicators

After statistically processing the results, we can provide data on the score obtained in the questions linked to each of the dimensions comprising media competence. In questions referring only to the technology dimension, respondents exceeded the pass mark, with an average score of 7.22 out of 10. Questions in which a lower score was obtained were the dimensions languages (1.33) and ideology and values (2.26). Poor scores were also obtained in questions relating to aesthetics (2.28), production and diffusion processes (3.24) and interaction processes (3.32). In the test overall, the average score obtained was 2.96, a long way from the 5 that would represent a pass.

Table 2. Score obtained in each of the dimensions comprising media competence

Dimension	Average	Maximum score	Typical Deviation	Average out of 10
Aesthetics	3.42	15	3.906	2.28
Languages	2.66	20	2.911	1.33
Ideology and values	5.66	25	4.389	2.26
Interaction processes	4.32	13	3.064	3.32
Production and diffusion processes	4.86	15	3.177	3.24
Technology	8.67	12	2.678	7.22
Total	29.60	100	12.76	2.96

Source: compiled by authors.

Significantly, differences were observed in terms of gender in the questions relating to the aesthetics dimension ($p<0.001$) and that of production and diffusion processes ($p=0.012$). Girls obtained a higher score than boys in questions about aesthetics, while boys obtained a higher score than girls in the production and diffusion process dimension. The level of education variable showed that the greater education the better the results in almost all the dimensions: aesthetics ($p<0.001$), ideology and values ($p<0.001$), interaction processes ($p<0.001$) and technology ($p<0.001$). The languages dimension was the exception ($p=0.06$), as the relationship is not significant. These differences can be observed in Table 3.

Table 3. Differences in each dimension in relation to gender and level of education. Data on the total score of each question: 15 aesthetics, 20 languages, 25 ideology and values, 13 interaction processes, 15 production and diffusion processes and 12 technology

	Aesthetics		Languages		Ideology and values		Interaction processes		Production and diffusion processes		Technology	
Gender	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Boy	2.97	1.50	2.42	2.00	5.49	5.00	4.34	4.00	5.13	5.00	8.69	9.50
Girl	3.74	3.00	2.83	2.00	5.78	5.00	4.30	4.00	4.66	4.50	8.66	9.00
Ed. level	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
None	0.17	0.00	1.61	0.44	4.88	7.27	1.88	1.00	3.56	3.00	7.91	7.00
Primary	1.81	0.00	2.27	1.00	3.80	2.50	2.84	2.75	3.96	3.50	8.14	8.50
Second.	3.35	2.00	2.50	2.00	5.50	5.00	4.07	4.00	4.52	4.50	8.63	9.00
Uni.	4.22	3.00	3.08	2.00	6.65	5.00	5.32	5.00	5.73	6.00	8.95	10.00

Source: compiled by authors.

Moving on to a more specific review of the results obtained in the questions for each dimension, and dismissing the percentages of lost cases, we see that most young people pass all the questions about Technology, although it is interesting that even in this dimension there are questions with a very high failure rate.

In one question, for example, two images were shown indicating the same reality (a rural scene) but with formal modifications in terms of light and colour. Respondents were asked if the second picture could have been obtained from the first, through some kind of processing and if so, what the processing would be. Practically all the young people (94.4%; $N=1.348$) replied affirmatively, but only 50.4% ($N=720$) knew the kind of procedure and only 32.2% ($N=460$) were able to name a specific image processing program such as *Photoshop*. If we look at the education variable, when asked whether an image can be obtained simply by modifying the other, the higher the level of education the more correct answers ($p=0.006$). In terms of the gender variable, the girls knew more than the boys about the kind of image processing procedure ($p=0.034$).

To the question of whether you could make a phone call to a landline from a computer connected to Internet, most replied correctly but the number of wrong answers was very high (35.5%; $N=504$). In this case, the boys gave more correct answers than the girls ($p=0.02$).

However, young people obtained a very high score in the question in which they had to list a series of technological concepts (Youtube, SMS, REC, lens, IPOD, digital memory, DVD) with a series of definitions. In this case there were 86.3% passes, compared to 13.7% ($N=196$) failures while 73.2% ($N=1.047$) of subjects in the sample obtained the top score. In terms of education level, the higher the level the greater the knowledge of the technological concepts ($p=0.001$).

Table 4. Results of the Technology Dimension

Question	Highest score		Percentage of failure	Percentage of passes	Highest score percentage	Lowest score percentage
Technological concepts (lens, digital memory, youtube, DVD, SMS, etc.	4		13.7% (N=196)	86.3% (N=1.234)	73.2% (N=1.047)	7.1% (N=101)
Technological image processing (<i>Photoshop</i>). Q.A. Existence of processing. Q.B. Type of processing.	A	1	5.6% (N=80)	94.4% (N=1.348)	94.4% (N=1.348)	5.6% (N=80)
	B	2	49.6% (N=707)	50.4% (N=720)	32.2% (N=460)	49.6% (N=707)
Start up a DVD Player	2		9.6% (N=137)	90.4% (N=1.293)	70% (N=1.001)	9.6% (N=137)
Use of Internet as phone	3		35.3% (N=504)	64.7% (N=926)	64.7% (N=926)	35.3% (N=504)

Source: compiled by authors.

Questions that obtained the lowest scores were those relating to the languages dimension. The highest percentage of passes (23.7%; N=340), which is extremely low, was obtained in a question that assessed the command of audiovisual language codes. Several very similar images were presented of the same model. The only differences were related to the setting, colour processing and the expressive use of the depth of the field. The subjects had to choose the one that best suited the title “thoughtful, sad, dreamy” and justify the choice. Most responses corresponded to the reality represented, which was identical, and not the manner of representation, which was what really differentiated the images from each other. The percentage of failures was very high (76.3%; N=1.090).

In another question they were shown nine images of two models in different situations but each in a restaurant. Subjects had to construct a visual story that was coherent and formally well-explained. Most committed errors in match cutting or crossing the sight line, which confused the receiver. Only 9.1% (N=131) of those surveyed were able to construct a visual sequence with no errors.

Lastly, only 11% of those surveyed (N=156) indicated they knew about codes (planning, depth of field, angulation etc.). In this case, the girls knew more about the codes than the boys ($p=0.003$). It is also notable that the higher the level of education, the higher the percentage of correct answers ($p<0.001$). What was alarming was the percentage of young people who obtained the lowest score in each of the three questions that comprised the dimension (79.6%, N=1,272; 32.3%, N=14 and 90.3%, N=1,290).

Table 5. Results of the Languages Dimension

Question	Highest score	Percentage of failures	Percentage of passes	Highest score percentage	Lowest score percentage
Knowledge of codes (planning, depth of field, angulation, etc.)	10	89% (N=1.272)	11% (N=156)	1.6% (N=23)	79.6% (N=1.137)
Choice of image that best suits the expression: sad, thoughtful and dreamy.	5	76.3% (N=1.090)	23.7% (N=340)	1% (N=14)	32.3% (N=340)
Construction of a visual sequence	5	90.9% (N=1.299)	9.1% (N=131)	2.8% (N=41)	90.3% (N=1.290)

Source: compiled by authors.

The results in questions related to ideology and values were also significant. When subjects were asked what reaction an advertisement provoked in them or what opinion it deserved, it was expected that their expertise would be demonstrated in spontaneous responses, and, in particular, their attitudes, as the advertisement had a clearly chauvinistic component. However, only 10% of young people in the sample were able to produce a reaction linked to the ideology and values the advertisement conveyed. 53.8% (N=770) made no reference to the question of values. Curiously, these deficiencies affected both male and female young adults, despite the sexism of the advertisement.

Responses relating to credibility of images were also surprising. 44.7% (N=639) of the young people in the sample stated that when the news is accompanied by images they are less at risk of being manipulated. Therefore, almost half of those surveyed see images as a guarantee of credibility, with no mention made of the underlying ideological component in decisions such as selection of certain images and rejection of others, the selection of a certain perspective or the effects arising from special formal processing.

Lastly, only 59.2% (N=845) of subjects give significant weighting to emotions in decision-taking, in contrast to the discoveries of neuro-science in recent decades. Over 40% consider that “if I buy a product because the argument of an advertisement has convinced me, I am not being swayed by emotions”.

In the questions relating to the ideology and values dimension, we see differences relating to education. These differences can be seen in all the questions with the same pattern: the greater the level of education, the greater the knowledge ($p<0.001$).

Table 6. Results of the Ideology and Values Dimension

Question	Highest score	Percentage of failures	Percentage of passes	Highest score percentage	Lowest score percentage
Critical reaction to an advertisement	20	90% (N=1,285)	10% (N=143)	0.5% (N=7)	53.8% (N=770)
Credibility of images	2.5	44.7% (N=639)	55.3% (N=791)	55.3% (N=791)	44.7% (N=639)
The weight of emotions in decisions	2.5	40.8% (N=583)	59.2% (N=845)	59.2% (N=845)	40.8% (N=583)

Source: compiled by authors.

The respondents were asked a single question linked to aesthetics, but it was an open question with ample possibilities. Participants were urged to act as if they were members of a jury, voting, from an artistic point of view, on the best of the two finalist advertisements and justifying as far as possible their choice. Results showed that young adults were incapable of assessing an advertisement with aesthetic criteria. 83.9% (N=1.200) of the sample failed and 40.1% (N=574) gained the minimum score (0). The arguments most gave were to do with the attractiveness of the elements shown (beauty of the model, impact of the scenery, elegance of the car) and not to do with the use of representation codes. Also, as mentioned previously, the girls scored higher than the boys in this dimension. ($p<0.001$). The score gained was also higher with the higher level of studies ($p<0.001$).

Table 7. Results of the Aesthetics dimension

Question	Highest score	Percentage of failures	Percentage of passes	Highest score percentage	Lowest score percentage
Artistic evaluation of an advertisement	15	83.9% (N=1.200)	16.1% (N=230)	1.6% (N=23)	40.1% (N=574)

Source: compiled by authors.

In the questions relating to production and diffusion, there were also a high number of failures. The exception was the question about the differences between public and private television. In this case there was 75.5% (N=1,065) of passes, and 10% (N=143) of these with top scores.

However, in the other questions in this dimension there was a high percentage of failures. The concept of *free software* is only known by 24.6% (N=354) of those surveyed. This is similar when the subjects had to list a series of professions in the audiovisual communications sector (director, producer, editor, props manager, camera man/woman, screen writer, stage manager) with a list of professional tasks, some of which were linked to these professions. This time only 30.8% (N=441) of the subjects were correct in their responses and 52.3% (N=748) obtained the highest score (0).

The results were similar when they were asked what steps they would follow if they had to make up a story with characters to be presented to a video contest. The majority were unaware of the production process phases. 70% (N=1,001) failed and 59% (N=844) of these obtained the lowest score (0). Lastly, to the question of when creating an audiovisual product and posting it on the Internet you can legally use any image or music, as long as you do not receive any financial gain, 55.6% (N=796) answered incorrectly.

It is important to highlight that the boys were more aware than the girls of the differences between public and private television ($p=0.02$) and the concept of free software ($p<0.001$). With regards to education level, the higher the training the better the results in the question about the differences between public and private television ($p<0.001$), to the question about communication professionals' tasks ($p<0.001$) and the question about the production process phases ($p=0.009$).

Table 8. Results of the Production and Diffusion Dimension

Question	Highest score	Percentage of failures	Percentage of passes	Highest score percentage	Lowest score percentage
Free software concept	2	75.4% (N=1.076)	24.6% (N=354)	24.6% (N=354)	75.4% (N=1.076)
Communication professionals (director, producer, camera man/woman, editor, stage manager, etc.)	3	69.2% (N=989)	30.8% (N=441)	14.6% (N=209)	52.3% (N=748)
Production process phases	4	70% (N=1,001)	30% (N=429)	4% (N=57)	59% (N=844)
Differentiation between public and private TV	3	25.5% (N=365)	75.5% (N=1.065)	10% (N=143)	25.5% (N=365)
Copyrights	3	55.6% (N=796)	44.4% (N=634)	44.4% (N=634)	55.6% (N=796)

Source: compiled by authors.

In questions relating to the processes of interaction with outside messages no better results were obtained. The concept of audimeter, for example, was unknown to 72.6% (N=1,038) of the people

surveyed. Meanwhile, only 17.2% (N=246) had basic knowledge of the social institutions to which they can address complaints regarding the media. And, even worse, from the attitudes point of view only 1.4% (N=20) indicate having made a complaint at any time, despite the fact that a large majority believe there are quite a lot or a lot of reasons to complain about the media. The boys were more aware of these institutions than the girls ($p=0.01$).

Lastly, the question about the interaction between emotions and reasoning in an advertisement was the only one in which 55.4% (N=793) of the young people in the sample obtained a pass and it is significant that 37.2% (N=532) gained the highest score.

In the interaction processes dimension it is also important that there were significant differences regarding the level of education: the higher the level of education, the better the results. These differences can be observed in each of the questions: the concept of audimeter ($p<0.001$), social institutions for addressing complaints ($p=0.002$) and interaction between emotions and reasoning ($p<0.001$).

Table 9. Results from the Interaction Processes Dimension

Question	Highest score	Percentage of failures	Percentage of passes	Highest score percentage	Lowest score percentage
Interaction between emotions and reasoning	4	44.6% (N=637)	55.4% (N=793)	37.2% (N=532)	29.1% (N=416)
Audimeter concept	4	72.6% (N=1.038)	27.4% (N=392)	27.4% (N=392)	72.6% (N=1.038)
Social co-accountability. Social institutions that look into complaints by citizens about the media	5	82.8% (N=1.183)	17.2% (N=246)	1.4% (N=20)	33.5% (N=479)

Source: compiled by authors.

8. Conclusions

The results of the research demonstrate serious deficiencies among Spanish youth in relation to their degree of media competence, understood as the capacity to interpret messages in an insightful and critical manner and to express themselves through various codes with a minimum of errors and creativity.

In the questions relating to technology, young people answered satisfactorily, although they need more training. In questions linked to the languages dimension, the population surveyed demonstrated severe limitations that affect their capacity to interpret messages received as well as their efficiency in constructing their own messages.

Given the importance of the ideology and values dimension for citizens' personal autonomy, the poor results obtained in questions relating to this dimension underline a dual problem. On the one hand, the need to educate youth to discover the latent ideology and values in messages that are not explicit, and on the other, the need to encourage more intensely the issue of critical attitudes, not just critical reflection. It is of little use, for example, that they know how to recognise a sexual stereotype if they are not bothered by them or their presence in a media message does not concern them.

The incapacity to approach the media with a critical attitude from the aesthetics perspective should be equally worrying. Perhaps this is a sign of the poor interest shown by academic institutions in training citizens from an aesthetically aware, creative and expressive innovation perspective.

The poor results obtained in the questions about the production and diffusion dimension should prompt reflection on the fragility of the concept of *prosumer*. It is of little use to have the tools that enable the citizen to produce messages in the same measure in which he/she consumes them, if he/she does not have the essential training to be able to produce them effectively; ignorant of the expression and aesthetic resources required to achieve greater communicative efficacy.

Lastly, the fact that youth were unaware of the institutions in charge of regulating and sanctioning the media must also be highlighted and also, especially, the fact that they do not have a committed and responsible attitude to alleged violations of legality by these media.

This reinforces the need to include regulated training in Media Education in Spain, especially among the younger population, and the need to assess regularly the level of media competence of the population.

It is also important to highlight that the investigation into Media Education in the international environment is making significant findings but the assessment of media competence of citizens, and more specifically, the youth, is still pending. It is therefore important that these studies should be undertaken, consistently, in the international arena.

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References

- AGUADED-GÓMEZ, Ignacio, *et al.*, *El grado de competencia mediática en la ciudadanía andaluza*, Grupo Comunicar y Universidad de Huelva, Huelva, 2011.
- AGUERRONDO, Inés, “Conocimiento complejo y competencias educativas”, IBE/UNESCO Working Papers on Curriculum Issues, nº 8, Suiza, 2009, p. 7.
- AREA, Manuel and PESSOA, Maria Teresa, “De lo sólido a lo líquido: Las nuevas alfabetizaciones ante los cambios culturales de la web 2.0”, *Comunicar*, vol. XIX, nº 38, Marzo 2012, pp. 13-20.
- BAWDEN, David, “Revisión de los conceptos de alfabetización informacional y alfabetización digital”, *Anales de documentación*, nº 5, 2002, pp. 261-408.
- AMALIA, Gabriela, “Las alfabetizaciones múltiples como eje de la formación docente”, *Razón y Palabra*, vol. XIII, nº 63, Julio-Agosto 2008.
- COLL, César, “Las competencias en la educación escolar: Algo más que una moda y mucho menos que un remedio”, *Aula De Innovación Educativa*, nº 161, 2007, pp. 34-39.
- Consell de l'Audiovisual de Catalunya (CAC), *Llibre blanc: L'educació en l'entorn audiovisual. Quaderns Del CAC*, nº extraordinario, 2003, pp. 120.
- COMISIÓN EUROPEA. “Recomendaciones sobre la alfabetización mediática en el entorno digital para una industria audiovisual y de contenidos más competitiva y una sociedad del conocimiento”. Diario oficial de la Unión Europea, Agosto 2009, p. 11/ pp. 9-12, the document is available online at http://www.mcu.es/cine/docs/Novedades/Recomendacion_Comision_Europea_sobre_Alfabetizacion_mediatica.pdf (27/02/2013).
- COMISIÓN EUROPEA, “Competencias clave para el aprendizaje permanente. Un marco de referencia europeo”, *Dirección General de Educación y Cultura*, 2007, p. 6/ pp. 1-12.
- COPE, Bill and KALANTZIS, Mary, “Multialfabetización: Nuevas alfabetizaciones, nuevas formas de aprendizaje”, *Boletín De La Asociación Andaluza de Bibliotecarios* 25 (98-99), Enero-Julio 2010, pp. 53-91.
- DE KETEKE, Jean-Marie, “Enfoque socio-histórico de las competencias en la enseñanza”, *Profesorado. Revista De Currículum y Formación De Profesorado* (3), 2008, pp. 1-12.
- FERNÁNDEZ-SALINERO, Carolina, “Las competencias en el marco de la convergencia europea: Un nuevo concepto para el diseño de programas educativos”, *Encounters on Education*, vol. 7, 2006, pp. 131-153.
- FERRÉS, Joan, AGUADED-GÓMEZ, Ignacio and GARCÍA-MATILLA, Agustín, “La competencia mediática de la ciudadanía española: dificultades y retos”, *Icono 14*, 10(3), 2012, pp. 23-42, DOI: 10.7195/ri14.v10i3.201.
- FERRÉS, Joan and PISCITELLI, Alejandro, “La competencia mediática: propuesta articulada de dimensiones e indicadores”, *Comunicar*, vol. XIX, nº 38, Marzo 2012, pp. 75-82.
- FERRÉS, Joan, *et al.*, *Competencia mediática. Investigación sobre el grado de competencia de la ciudadanía en España*, España, Ministerio de Educación (Instituto de Tecnología Educativa), Consell de l' Audiovisual de Catalunya y Grupo Comunicar, 2011, pp. 206.
- FERRÉS, Joan, “La transformación del paisaje comunicativo”, *Lenguajes y Textos. Revista de la Sociedad Española de Didáctica de la Lengua y la Literatura*, nº 34, Diciembre 2011, pp. 9-15.
- FERRÉS, Joan and SANTIBÁÑEZ, Josefina, *Informe de investigación Competencia mediática. Investigación sobre el grado de competencia de la ciudadanía en la Comunidad Autónoma de La Rioja*, Grupo Comunicar y Universidad de La Rioja, Huelva, 2011.
- FERRÉS, Joan, “La competencia en comunicación audiovisual: propuesta articulada de dimensiones e indicadores”, *Quaderns del CAC*, nº 25, Mayo-Agosto 2006, pp. 9-17.
- FERRÉS, Joan, “La educación en comunicación audiovisual en la era digital”, *Quaderns del CAC*, nº 25, Mayo-Agosto 2006, pp.5-8.
- GARCÍA, Francisco and ROSADO, María Jesús, “Conductas sociocomunicativas de los nativos digitales y los jóvenes en la web 2.0”, *Comunicación y Sociedad*, vol. XXV, nº 1, 2012, pp.15-38.
- GARCÍA, Felipe, *et al.*, “Nativos digitales y modelos de aprendizaje”, *Actas IV Simposio Pluridisciplinar Sobre Diseño, Evaluación, y Desarrollo De Contenidos Educativos Reutilizables*, Bilbao, Setiembre 2007.

- GUTIÉRREZ, Alfonso, “Creación multimedia y alfabetización en la era digital”, in APARICI, Roberto (coord.), *Educomunicación: más allá del 2.0*, Gedisa, Barcelona, 2010, pp. 171-185.
- GUTIÉRREZ, Alfonso, PALACIO, Andrés and TORREGO, Luis, “Tribus digitales en las aulas universitarias”, *Comunicar*, vol. XVII, nº 34, Marzo 2010, pp. 173-181.
- JENKINS, Henry, *et al.*, *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*, MacArthur Foundation, 2006, pp. 68.
- KAPLÚN, Mario, “Una pedagogía de la comunicación”, en APARICI, Roberto (coord.), *Educomunicación: más allá del 2.0*, Gedisa, Barcelona, 2010, pp. 41-61.
- KENDALL, Alex and MC DOUGALL, Julian, “Alfabetización mediática crítica en la postmodernidad”, *Comunicar*, vol. XIX, nº 38, Marzo 2012, p. 22/ pp. 21-29, (DOI: 10.3916/C38-2012-02-02).
- Ley 7/2010, de 31 de marzo, General de la Comunicación Audiovisual. *Boletín Oficial del Estado*, 1 de Abril de 2010, núm. 79, pp. 30157 – 30209. Disponible en: <http://www.boe.es/boe/dias/2010/04/01/pdfs/BOE-A-2010-5292.pdf> (27/02/2013)
- Ley 8/1995, de 27 de julio, de atención y protección de los niños y los adolescentes y de modificación de la Ley 37/1991, de 30 de diciembre, sobre medidas de protección de los menores desamparados y de la adopción. DO. Generalitat de Catalunya 2 agosto 1995, núm. 2083, pp. 5773. BOE 30 agosto 1995, núm. 207, pp. 26.613
- PISCITELLI, Alejandro, *Nativos digitales: Dieta cognitiva, inteligencia colectiva y arquitecturas de la participación*, Buenos Aires, Santillana, 2009.
- PRENSKY, Marc, *Digital natives, digital immigrants*, On the Horizon, MCB University Press 9 (5), 2001.
- TOBÓN, Sergio, “El enfoque complejo de las competencias y el diseño curricular por ciclos propedéuticos”, *Acción Pedagógica*, nº 16, Enero-Diciembre, 2007, pp. 14-28.