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Interactive Digital Communication: assessment of academic competencies and professional profiles by communication professionals, faculty and students

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Abstract

Introduction. The communication sector has experienced remarkable changes provoked by the phenomenon of digitalisation and the rise of new technologies. Due to these changes, it has become urgent to assess whether the academic competencies and professional profiles currently considered in BA degrees in Communication are adapted to the needs and changes of the Interactive Digital Communication sector. **Methods.** This assessment is based on a survey applied to a sample of professionals, faculty and students in the area of communication, and on interviews with professionals of the same sector. **Results and discussion.** The most valued competencies are related to adaptation to changes, autonomous learning and digital specialisation, which leads us to think that the Communication sector is changing but also that at the moment the university education system has not been able to adapt.

Keywords

Interactive Digital Communication; Academic competencies; Professional profiles; University education; Digitisation.

Contents

1. State of the art review. 2. Digital media and education: new literacies. 3. Research objectives and methods. 4. Results and discussion. 5. Conclusions. 6. References.

Translation by CA Martínez-Arcos (PhD in Communication, University of London)

1. State of the art review

In the last decade, the communication sector linked to Information and Communication Technologies (ICT) has experienced remarkable changes provoked by the phenomenon of digitisation and the rise of new technologies. Currently, these technologies are configuring a new heterogeneous landscape and act as an engine of the economy, as it has been observed in several European countries (FTI-AMETIC, 2011; Preston et al., 2009). Gradually, this process has had an increasingly evident economic, social, cultural and academic impact: the digital becomes intertwined with social activities as well as the public-private and institutional-individual spheres (Livingstone, 2011). From an economic point of view, the sector of digital communication and digital media in Europe is living a favourable time characterised by an unstoppable growth (Preston et al., 2009).

From a sociocultural perspective, the flourishing of interactivity, transmediality and hypermedia favour consumers' specialisation in media competencies. The term "consumer" falls into disuse in favour of the "prosumer" (García-Ruiz *et al.*, 2014; Ha & Yun, 2014), who acquires knowledge of digital technology management often on the fringes of formalised teaching. For the new generation of young people, also called digital natives, the use and innovation linked to new technologies –mobile phones, videogames, computers- influence and become part of their everyday life (McMillan and Morrison, 2006). Many studies also highlight the idea that students are in favour of using social media as educational resources (Aymerich-Franch and Fedele, 2014; Gómez, Roses and Farias, 2012; among others).

As a result, it is urgent to review digital media education programmes in a broad sense: combining knowledge of daily practice with critical thinking to be able to approach digital communication from its challenges and possibilities (Buckingham, 2003; Dezuanni, 2014). In a previous phase of this study (USQUID, 2015), a benchmarking method (Romaní, 2009) was used to evaluate 20 universities around the world, of which six were European and other three Spanish. The sample was composed of the highest-ranked universities and the opinions of teachers and the academic commission of the Universitat Pompeu Fabra (Barcelona). The findings indicate a strong implementation of studies on Interactive Digital Communication (digital media, digital communication and interactive media) in the United States, Canada and Northern Europe. However, the introduction of this type of study in Spanish universities is still a minor.

In Spain, degrees in the field of communication need to adapt accordingly after a lethargy of more than twenty years since their creation. This is mainly due to two key factors: the changes arising from technological developments (Salaverría & Avilés, 2008) and the problem of training not adapted to current work practices. There is a need to compensate the knowledge acquired at the university with the abilities and competencies in high demand in the digital sector. In addition, professionals must face a constant renewal and specialisation given the impending gap between the traditional competencies that are disconnected from the new technologies.

Today, most media companies work with digital publications, in part due to the need to compete with social media, which moulds public opinion at the expense of traditional media (Zerfass *et al.*, 2017). The reality is that we can now speak of a differentiated field in this regard: Although the mainstreaming of digital content crosses many sectors (marketing and communication, programing, visual design, art and creativity), new exclusive digital competencies emerge. Digital competencies refer to the areas of knowledge and skills derived from the introduction of new technologies in communication environments (García-Gutiérrez, 2013). This demand leads us to consider the possibility of implementing a new line of Interactive Digital Communication studies. Faced with this idea, there are two options: either the creation of a new degree (of three or four years), or the establishment of a complementary elective module (of two years) to reinforce the existing offer.

2. Digital media and education: new literacies

Given the nature of this article, it is necessary to define certain concepts that will help us to establish the scope and limits of what we know as digital communication. For a while now, new ways of obtaining of knowledge related to digital media have emerged and continue to emerge. Mobile technology, video games and the Internet create non-print forms of learning that highlight the need to investigate these new cognitive processes. While the introduction of computers in the classroom supposes the continuation of the study in a classical sense although mediated by the screen, the focus of the current interest lies in the understanding of forms of participatory culture -fan fiction, social networks, blogs- (Jenkins and Deuze, 2008), and the study of video games and interactive practices design, human-computer interaction- (Barry and Doherty, 2016) to see how they influence and feed on education through our social, political and cultural relations.

Several authors have termed this emerging area as "digital literacies" (Buckingham, 2007a; Livingstone, 2012; Aslinger and Huntemann, 2013) and "new literacies studies", which refer to the study of "new types of literacy beyond print literacy, especially 'digital literacies' and literacy practices embedded in popular culture" (Gee, 2010:31) and transmedia literacy (Scolari, 2016). In addition, the "new literacies studies" converge with the "new media literacies", which "underline the way in which digital tools and the media built through them are transforming society, and in particular, popular culture" (Gee, 2010:34).

As a result, it is necessary to think not only about their use, but also about the process of production, distribution and consumption of digital content (Aslinger and Huntemann, 2013). In this sense, two problems derive from the literature review: the first has to do with the digital education and the lack

of consensus on its categorisation as a tool, discipline or study area. The second concerns the problem of the credibility in the gathering of information and the transfer of power, from the institution to the community (Metzgen and Flanagin, 2008). Digital media question the established authority, so that the knowledge acquired by young people on the fringes of the academia should be directed towards critical thinking through educational guidelines that allow them to learn to become "prosumers".

In this line, many European and North American universities already include studies on digital and interactive media in their educational offer. In contrast, in the Spanish context, there are studies that highlight the need to incorporate modules related to media literacy in all degrees in communication (Ferrés and Masanet, 2015). Ferrés and Masanet depart from idea that media literacy is an essential requirement in the current social and cultural environment, where most communications are mediated by digital technologies. As anticipated in the previous section, the process of digitisation is changing work practices in universities and research sectors. Studies on digital media require new competencies and require the combination of classical and emerging methods. At the same time, "the economic imperatives of recruitment increasingly demand more multifaceted candidates" (Aslinger and Huntemann, 2013:12).

3. Research objectives and methods

3.1. Objectives

This article is part of the second phase of a project entitled "Evaluation and restructuring of communication degrees in the Pompeu Fabra University" (Avaluació i Reestructuració dels Estudis en Comunicació de la Universitat Pompeu Fabra), whose general objective is to adapt the communication degrees of the Pompeu Fabra University (Barcelona) to the new professional demands of companies and institutions and the expectations of national and international students, as well as to update the lines of research of the University's postgraduate studies. This second phase focuses on identifying the main professional profiles and digital competencies in the communication sector that are changing or arising as a result of ICT. The specific objectives are to study transformed and emerging new profiles in the field of Interactive Digital Communication and to assess the competencies associated with them.

Given that communication studies are undergoing a stage of transformation, it is urgent to collect information and opinions from professionals, students and university managers in the digital sector. Thus, this research uses a triangulation method based on a survey applied to a sample of professionals, students and faculty in the sector of digital communication, and interviews with professionals in the same sector. While the survey allows us to obtain an overview of the current landscape in the digital media sector, the interviews provide more detailed information, so both techniques complement each other to provide a holistic perception.

3.2. Surveys

The survey was carried out between April and June 2017 through an online questionnaire designed with *Google Forms*. Its design took into account the competencies proposed by the National Agency

for Quality Assessment and Accreditation (ANECA) of Spain in its 2005 White Paper for Communication Degrees. Some competencies of similar nature were unified in order to simplify and update the questionnaire while new competencies that are related to the changes arising from ICT and have been identified in previous research (Sanchez-Sanchez et al., 2016) were added. The survey took into account a total of 62 competencies (19 disciplinary, 21 professional, 10 academic and 12 specific).

The survey was applied to professionals, faculty and students in the area of communication. To nourish the sample, we contacted 94 companies in the communication sector, 75 bodies related to the practice of communication (professional associations and sector associations) and 50 communication departments or schools of universities offering degrees in communication across Spain. All these organisations were asked to disseminate the survey among their staff, members, teachers and/or students whose professional area was directly related to the exercise of communication.

Respondents were asked to rate the degree of importance of a total of 62 competencies, using a 5-point Likert scale, where: 1 is Not Important; 2 is Slightly Important; 3 is Moderately Important; 4 is Important; and 5 is Very Important. Competencies were structured in four thematic blocks, following the distribution used in the ANECA's white paper: a) disciplinary areas of knowledge (know), b) professional competencies (know-how), c) academic competencies, and d) other competencies (specific competencies).

3.3. Interviews

The interviews provided detailed information, which allowed us to describe and understand a particular social phenomenon based on the experience of the research participants (Cerón, 2006). The interviews were conducted with professionals of the communication sector by following a formal and descriptive model that allowed us to know and understand the object of study (Brinkmann, 2013), i.e., with the purpose of obtaining specific answers about professional competencies and professional profiles in the field of interactive digital communication. A convenience sampling method was used to choose professional profiles fitting the thematic areas proposed by ANECA (2005). All interviewees responded to the same questions in the same way and in the same order. The interviews were carried out through online questionnaires during May, June and July 2016 with a total of 19 professionals from the communication sector (11 women and 8 men) with a working experience ranging from 5 to 29 years.

4. Results and discussion

4.1. Distribution of the sample by areas of communication

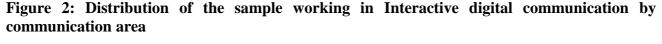
A total of 266 valid questionnaires were collected from the survey conducted in this phase of the research. However, the analysis of this article focuses on the responses of the 48 participants who placed themselves within the specific scope of digital and interactive communication (see Figure 1). As we can see in Figure 2, 41.7% of this sample worked exclusively in the area of digital and interactive communication, while the rest worked simultaneously in digital and interactive communication and other areas of communication.

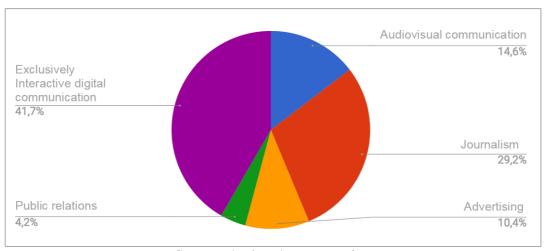
Interactive Digital Communication
18,0%

Other areas of communication
82,0%

Figure 1: Percentage of the sample working in Interactive Digital Communication

Source: Authors' own creation





Source: Authors' own creation

From these data we can draw two conclusions. First of all, the perception of the integration of Interactive Digital Communication (IDC) in the Spanish professional fabric is not as high as it could be estimated, unless respondents still do not perceive themselves in this area. Only 18% of the 266 participants placed themselves within the area of IDC, and only 9.40% placed themselves exclusively in this area. This may be due to the fact that Spain has not a tradition based around IDC as a specific area, and so respondents still place themselves within the rest of the traditional areas marked by the

university system (journalism, advertising, media and public relations). Secondly, the area of IDC is closely linked with the rest of the traditional areas, since 58.4% of the respondents who locate themselves in the area of IDC also place themselves in another area marked by the Spanish university system (journalism, advertising, media and public relations).

4.2. Competencies by thematic blocks

In relation to the competencies, the initial analysis by competence blocks indicates that on average all competencies have received positive above-average scores. In fact, if we look at the average of their modes, all of them are scored above 4, i.e., in general terms most of the respondents consider competencies of the four thematic blocks as "important" or "very important".

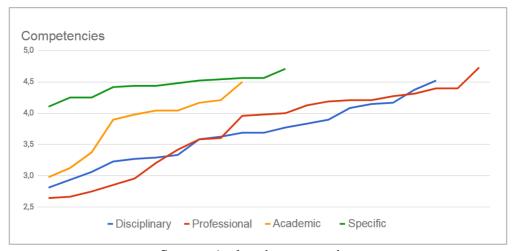
In particular, the competencies that receive the highest scores from respondents are the specific ones (S), with an average of 4.44 points out of 5 on the Likert scale. In second position are the academic competencies (A), which received an average score of 3.83 points. They are followed by the professional competencies, with an average score of 3.74 points, and the disciplinary competencies, which have average score of 3.65 points (see Figure 3).

Table 1: Arithmetic means and descriptive statistics of competence blocks.

Competencies	Average Deviat		Mode
Disciplinary	3.65	1.04	4.00
Professional	3.74	1.07	4.24
Academic	3.83	0.98	4.20
Specific	4.44	0.74	4.92

Source: Authors' own creation

Figure 3: Average oscillation range of competence blocks.



Source: Authors' own creation

The analysis of the oscillation ranges of the average values of each of the four thematic blocks indicates that all the specific competencies are located above the 4 points on the Likert scale, i.e., all of them are considered as "important" or "very important". On the other hand, the rest of the blocks are distributed more unevenly, from 2.65 to 4.73 points (see Figure 4).

The standard deviation data indicates that the specific competencies have a deviation degree far below the rest of the blocks (0.74), so their positive assessment (4.44 points in average) is also the most homogeneous of the four blocks. This means that most of the surveyed participants coincide on their high rating of the set of specific competencies. On the other hand, professional competencies have the highest standard deviation (1.07 points). This means that there is a greater disparity between the scores given by respondents in relation to the competencies that make up this block (see Figure 5).

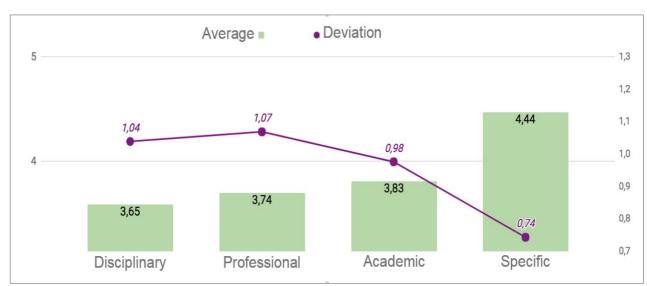


Figure 4: Relation between average values and deviation by competence blocks.

Source: Authors' own creation

4.2. Relation between lowest and highest scored competencies

The analysis by competence confirms that the professional competencies have the greater internal disparity, since they encompass the highest and lowest scored competencies out of the 62 competencies under study (see figures 6 and 7). The lowest-valued competence of all the survey, with 2.65 average points on the Likert scale, is the professional competence "Adjust the quantity and quality of sound, light and colour during the production process" (P8), perhaps because it is a technical competence that is part of the production process, which in many cases is beyond the scope of action of digital and interactive communication.

Table 2: 10 lowest-valued competencies.

Code	Competence	Average	Deviation
P8	Adjust the quantity and quality of sound, light and colour during the production process	2.65	1.25
P15	Recreate the sound environment of audiovisual or multimedia productions according to the text's intent and narrative	2.67	1.17
P21	Use animation techniques and special effects	2.75	1.34
D4	Knowledge of the history, evolution and social relevance of photography, cinema, radio, television and the Internet	2.81	0.94
P4	Analyse the structures, contents and styles of television and radio programming	2.85	1.30
D1	Knowledge of the historical evolution, processes, theories and psychological models of communication	2.94	1.16
P16	Create and direct the full staging of audiovisual productions	2.96	1.32
A5	Knowledge of theories, methods, languages and problems of audiovisual communication	2.98	1.14
D16	Knowledge of the methods of creative thinking (schools, methods and techniques), message-creation processes and their analysis	3.06	1.12
A8	Knowledge of the didactics of the disciplines of information and communication	3.13	1.10

Source: Authors' own creation

The highest rated competence has been the professional competence "Learn autonomously and adapt to changes" (P12), with an average of 4.73 points. This competence also presents greater homogeneity in terms of the scores given by respondents, with a standard deviation of 0.57 points, which means that all participants of the survey coincide in giving it a positive evaluation. On the contrary, the competence presenting the greatest degree of disparity among respondents is the professional competence "Use animation techniques and special effects", with a standard deviation of 1.34 points with respect to an average score of 2.75 points, i.e., on a negative below-average score.

Table 3: 10 highest-ranked competencies

Code	Competence	Average	Deviation
P12	Learn autonomously and adapt to changes	4.73	0.57
E4	Capacity to adapt to technological, business and organisational changes	4.71	0.58
	Capacity for critical analysis, synthesis and judgement. Knowledge of how to relate causes and effects	4.56	0.65

E10	Insight, inventiveness and creativity to find effective solutions to new problems	4.56	0.65
E3	Capacity to work in a team in different environments, communicate personal ideas and become part of a common results-based project, without losing autonomy, preserving one's own identity and values	4.54	0.74
D2	Knowledge of and capacity to apply sector-specific software and new digital technologies	4.52	0.82
E11	Capacity for self-criticism and correction of own mistakes	4.52	0.65
A10	Ability to search and manage information in a digital environment	4.50	0.74
E2	Knowledge of how to manage time and organise tasks	4.48	0.68
E7	Ability to make decisions in situations of uncertainty, assuming risks and responsibilities	4.44	0.68

Source: Authors' own creation

4.3. Disciplinary competencies

The highest-ranked disciplinary competence (Knowledge of and capacity to apply sector-specific software and new digital technologies) is closely related to the field of IDC. This competence has also a low standard deviation (0.82 points), which means that most respondents coincide homogeneously in rating it as "very important". In fact, this competence appears among the 10 most valued competencies of all kinds. The list of the highest-ranked disciplinary competencies includes one that also highlights the importance of the introduction of ICT in the exercise of the profession (Knowledge of the evolution and social impact of contemporary ICT). It is interesting to find this competence among the best valued, since usually the more theoretical and less practical competencies tend to receive lower ratings. In fact, the list of the lowest valued disciplinary competencies includes all those related to areas of knowledge that are more theoretical ("Knowledge of the theories of advertising, public relations and corporate communication" and "Knowledge of the methods of creative thinking [schools, methods and techniques], message-creation processes and their analysis") and historical (Knowledge of the history, evolution and social relevance of photography, cinema, radio, television and the Internet; Knowledge of the historical evolution, processes, theories and psychological models of communication; and Knowledge of the historical, political, economic, cultural and aesthetic parameters of societies and their influence in communication). Three of these lowest valued disciplinary competencies are also among the 10 lowest-valued competencies of all the competencies in the questionnaire.

The set of the highest-valued disciplinary competencies includes also the correct use of the languages and above all English (Capacity to apply properly native languages and the English language to the sector). The other competencies that are valued positively are "Knowledge of the functioning of a communication department, its direction and management of knowledge and intangible assets",

"Evaluate the corporate state of an organisation and know and design communication strategies", and "Knowledge of marketing processes and specific techniques: positioning, segmentation and efficiency analysis and measurement". All of these competencies have, in addition, the smallest standard deviation scores.

Table 4: Average importance, standard deviation and mode of disciplinary competencies

Code	Competence	Average	Deviation	Mode
D1	Knowledge of the historical evolution, processes, theories and psychological models of communication	2.94	1.16	2
D2	Knowledge of and capacity to apply sector-specific software and new digital technologies	4.52	0.82	5
D3	Knowledge of and capacity to apply resources, methods and procedures to create and analyse audiovisual narratives	3.69	1.11	4
D4	Knowledge of the history, evolution and social relevance of photography, cinema, radio, television and the Internet	2.81	0.94	3
D5	Evaluate the corporate state of an organisation and know and design communication strategies	4.15	0.95	5
D6	Knowledge of the organisational structures and capacity to apply techniques, processes and phases of audiovisual production and dissemination	3.58	1.25	4
D7	Learn about the economic and social aspects of advertising and public relations companies: labour relations, legal, fiscal aspects, financing, market.	3.29	1.09	3
D8	Capacity to apply properly native languages and the English language to the sector	4.38	0.67	5
D9	Knowledge of the ethics, professional deontology and legal framework of the sector	3.69	1.13	4
D10	Knowledge of the structure of advertising media: characteristics, typologies and problems	3.33	1.02	3
D11	Knowledge of the sector's research and analysis methods and techniques	3.83	1.04	5
D12	Knowledge of the functioning of a communication department, its direction and management of knowledge and intangible assets	4.17	0.86	5
D13	Knowledge of the evolution and social impact of contemporary ICT	3.90	1.04	4
D14	Knowledge of the media's structure and main platforms and formats	3.77	1.06	5

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D15	Knowledge of the theories of advertising, public relations and corporate communication	3.23	1.15	3
D16	Knowledge of the methods of creative thinking (schools, methods and techniques), message-creation processes and their analysis	3.06	1.12	4
D17	Knowledge of the historical, political, economic, cultural and aesthetic parameters of societies and their influence in communication	3.27	1.18	3
D18	Knowledge of marketing processes and specific techniques: positioning, segmentation and efficiency analysis and measurement	4.08	1.09	5
D19	Learn about advertising processes, organizational structure, the operation and management of enterprise communication.	3.63	1.06	4

Source: Authors' own creation

4.4. Professional competencies

As we have seen, the set of professional competencies includes both the best and the worst valued of all the competencies of the questionnaire. The most valued competence was "learn autonomously and adapt to changes", with an average score of 4.73 points on the Likert scale and a very low standard deviation of 0.57 points. The set of the 10 most valued competencies of all the questionnaire does not include any other professional competence. On the other hand, there are five professional competencies among the 10 lowest valued competencies. These competencies are technical and/or linked to the phases of audiovisual production (Adjust the quantity and quality of sound, light and colour during the production process; Recreate the sound environment of audiovisual or multimedia productions according to the text's intent and narrative; Use animation techniques and special effects; Analyse the structures, contents and styles of television and radio programming; and Create and direct the full staging of audiovisual productions). All of these competencies received average scores below 3 points, i.e., they are usually considered as "Not Important" or "Slightly Important".

Other high-ranked professional competencies within their internal block, with average scores above 4 points, are: "Retrieve, analyse, process and disseminate information"; "Set the communication plan: objectives, target audience, strategies and budget control"; "Apply communication techniques in different media and multimedia interactive platforms"; "Write fluently texts, step-outlines and scripts; Program and optimise web pages (SEO and SEM)"; and "Create content for different media and control the continuity of the narrative discourse across them". Many of these competencies are related to greater or less extent with the professional exercise in digital environments.

Table 5: Average importance, standard deviation and mode of professional competencies

Code	Competence	Media	Deviation	Mode
P1	Retrieve, analyse, process and disseminate information	4.40	0.89	5
P2	Organise and manage technical resources	3.60	1.12	4
P3	Manage strategically a company's corporate image, adding value to its products and services	3.96	1.07	5
P4	Analyse the structures, contents and styles of television and radio programming	2.85	1.30	3
P5	Apply communication techniques in different media and multimedia interactive platforms	4.31	0.85	5
P6	Use data and statistics correctly	4.13	0.96	5
P7	Program and optimise web pages (SEO and SEM)	4.21	0.99	5
P8	Adjust the quantity and quality of sound, light and colour during the production process	2.65	1.25	3
P9	Write fluently texts, step-outlines and scripts	4.27	0.94	5
P10	Search, select and systematise any type of audiovisual document in a database	3.42	1.13	3
P11	Assemble sound and visual materials according to an idea using the necessary narrative and technological techniques	3.21	1.22	4
P12	Learn autonomously and adapt to changes	4.73	0.57	5
P13	Create content for different media and control the continuity of the narrative discourse across them	4.21	0.92	5
P14	Design formal and aesthetic aspects in written, graphic, audiovisual and digital media	3.58	1.15	4
P15	Recreate the sound environment of audiovisual or multimedia productions according to the text's intent and narrative	2.67	1.17	3
P16	Create and direct the full staging of audiovisual productions	2.96	1.32	3
P17	Set the communication plan: objectives, target audience, strategies and budget control	4.40	0.96	5
P18	Devise, plan and execute communicative projects	4.19	1.07	5
P19	Create, develop and monitor graphic elements, images and texts in a creative way	4.00	1.19	5
P20	Assist, advise and help clients, continuously, during and after the execution of their communication actions	3.98	1.02	4
P21	Use animation techniques and special effects	2.75	1.34	3

Source: Authors' own creation

4.5. Academic competencies

Of the total set of 62 competencies listed in the questionnaire, only one academic competence is among the top 10 rated by respondents. It is important to note that this competence is directly linked with the digital environment (Ability to search and manage information in a digital environment). This competence obtained an average score of 4.50 points on the Likert scale and a very low standard deviation of 0.74 points. Other high-ranked academic competence, with an average score above 4 points, are: "Present properly research results in oral, written, audiovisual or digital manner" and "Ability to adapt to organisational objectives and culture". The digital environment is explicitly mentioned in the former, and the need for adaptation is highlighted in the latter.

On the other hand, the set of the 10 lowest-valued competencies of the survey includes two academic competencies (Knowledge of theories, methods, languages and problems of audiovisual communication; and Knowledge of the didactics of the disciplines of information and communication), both of which are theoretical and little practical in the daily practice of the profession.

Table 6: Average importance, standard deviation and mode of academic competencies

Code	Competence	Media	Deviation	Mode
A1	Identify relevant research topics, properly define and use information sources to generate knowledge in the area of communication	4.04	0.97	4
A2	Ability to adapt to organisational objectives and culture	4.17	0.88	5
A3	Ability to structure complex knowledge in a coherent way and interact with other disciplines	3.90	1.15	5
A4	Assume leadership in projects that require human and financial resources, managing them efficiently and assuming the principles of social responsibility	4.04	0.92	5
A5	Knowledge of theories, methods, languages and problems of audiovisual communication	2.98	1.14	3
A6	Capacity to understand and interpret critically a complex communicative environment	3.98	0.89	4
A7	Know how to evaluate media productions	3.38	1.06	3
A8	Knowledge of the didactics of the disciplines of information and communication	3.13	1.10	3
A9	Present properly research results in oral, written, audiovisual or digital manner	4.21	0.90	5
A10	Ability to search and manage information in a digital environment	4.50	0.74	5

Source: Authors' own creation

4.6. Specific competencies

The set of specific competencies is the best-valued competence group by respondents. All of them received scores above 4 points on the Likert scale. Thus, it can be said that this block of competencies is considered to be highly relevant. In fact, 7 of the 10 best-valued competencies of the questionnaire are specific competencies ("Capacity to adapt to technological, business and organisational changes"; "Capacity for critical analysis, synthesis and judgement and knowledge of how to relate causes and effects"; "Insight, inventiveness and creativity to find effective solutions to new problems"; "Capacity to work in a team in different environments, communicate personal ideas and become part of a common results-based project, without losing autonomy, preserving one's own identity and values"; "Capacity for self-criticism and correction of own mistakes"; "Knowledge of how to manage time and organise tasks"; and "Ability to make decisions in situations of uncertainty, assuming risks and responsibilities"). Of these competencies, the one that obtained the highest score is precisely the one linked the most with ICT and with the idea of adapting to changes ("Capacity to adapt to technological, business and organisational changes"), which obtained an average score of 4.71 points and a standard deviation of 0.58.

In addition, the set of specific competencies presents the highest degree of agreement in respondents' answers, since the standard deviation is below 1, with the exception of a competence that has a deviation of 1.08 points. This means that the average scores for all of these twelve specific competencies are rather homogeneous; i.e., all above 4.

Table 7: Average importance, standard deviation and mode of specific competencies

Code	Competence	Media	Deviation	Mode
E1	Capacity for the objective analysis of reality and extraction of valid considerations	4.25	0.73	4
E2	Knowledge of how to manage time and organise tasks	4.48	0.68	5
E3	Capacity to work in a team in different environments, communicate personal ideas and become part of a common results-based project, without losing autonomy, preserving one's own identity and values	4.54	0.74	5
E4	Capacity to adapt to technological, business and organisational changes	4.71	0.58	5
E5	Capacity to transmit knowledge and advances to the non- specialised majority in a comprehensive and effective way	4.42	0.74	5
E6	Equality awareness of individuals, peoples, cultures and respect for international human rights	4.10	1.08	5
E7	Ability to make decisions in situations of uncertainty, assuming risks and responsibilities	4.44	0.68	5

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E8	Capacity for critical analysis, synthesis and judgement. Knowledge of how to relate causes and effects	4.56	0.65	5
E9	Capacity to act freely and responsibly, assuming ethical references, values and consistent principles	4.44	0.85	5
E10	Insight, inventiveness and creativity to find effective solutions to new problems	4.56	0.65	5
E11	Capacity for self-criticism and correction of own mistakes	4.52	0.65	5
E12	Capacity to apply interdisciplinary knowledge to the creation of communicative messages	4.25	0.89	5

Source: Authors' own creation

4.7. Relationship between professional competencies and professional profiles

The survey results show the general trend in terms of competencies. These results are complemented with the interviews which help us contextualise competencies in relation to respondents' views on the professional profiles of the area of Interactive Digital Communication.

The two most important competencies according to respondents refer to the ability to adapt to change ("learn autonomously and adapt to changes" and "Capacity to adapt to technological, business and organisational changes"). Precisely, the results of the interviews indicate that several respondents refer to the ability to adapt. Most of them do so to explain that traditional profiles have to be adapted to the new situation of the labour market, which is largely marked by technological change:

- "Flexible to adapt to the needs of society and the labour market" (Interview #2)
- "At the end all of this translates into 'either you adapt or you're out" (Interview #7)

Respondents generally perceive that many of the traditional profiles are being extinguished, but also that professional competencies can be adapted to the new context:

- "Traditional profiles must be adapted to the new demands. Otherwise they will eventually disappear" (Interview #5)
- "It can be the case that a particular professional profile disappears, but the professional competencies can be adapted to the new profile that emerges" (Interview #13)

Others say that traditional profiles can co-exist with emerging profiles, but provided they undergo a process of adaptation to the new context:

- "The traditional profiles can coexist perfectly if they adapt to new times" (Interview #9)
- "The good thing about these traditional profiles is that they have manged to evolve to the point of having their own niche in today's job market, because they have adapted to the needs of the latter" (Interview #11)

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However, the general opinion is that this ability to adapt has to arise independently from the professional himself, through an effort to keep up-to-date and receive training continuously:

- "As I have said, either you adapt or you are out. It all depends on your attitude" (Interview #7)
- "Adaptability, ultimately we make tailored suits, curiosity to stay up to date and of course creative ability" (Interview #8)
- "Understand the new communicative situation, adapt to it, and receive education continually" (Interview #14)

The interviews also indicate that another important aspect is versatility. This versatility is related to a context of economic crisis that provokes layoffs, which in turn forces workers to take on more and new tasks. On the other hand, it is related with the need to adapt to the needs demanded by the new formats, especially those related with the digital environment.

- "The lowering of cost makes the profiles that were previously not so linked to technology perform technical tasks" (Interview #1)
- "A single professional profile works out less every time" (Interview #7)
- "Versatility does not oppose specialisation. One can be specialised in one area, but at the same time be versatile and flexible to adapt to the needs of society and the job market" (Interview #2)
- "The same applies to professional versatility. Honestly, I don't believe in professional specialisation at a minuscule level. I work in a social media agency, and we do online campaigns. But we also design, manage accounts, organise offline activities integrated with the online environment. We can be specialists in social networks without being reluctant to do other things" (Interview #12)

Finally, the outstanding aspect of the interviews is the assertion that there has been a transformation in the communication ecosystem that is closely related to the technological evolution, the emergence of ICT and the digital environment. Some point out that they did not see this change coming, that it was progressive, and that it is necessary to teach the new communication professionals to use digital environments. In other words, respondents point out that the digitalisation of the environment requires digital expertise in the professional profiles of communication.

- "Professional profiles are being transformed with the introduction of social media."
- "Virtually all of the profiles are transformed by technological evolution."
- "Perhaps some professions are disappearing, or the number of vacancies is being reduced dramatically, such as newspaper writers, for example. I will not blame those editors for not making their professional profile more digital, but that is there."
- "It is not a change that we saw coming, but it has been very progressive. We need to see these coming changes and place ourselves in the right position to be prepared for when the time comes."
- "We must teach people to be online communication professionals, teach them to use social media, manage their contents, etc."
- "One cannot be a communication professional if one dismisses social networks, because it is a suicide... It is a consequence of the digitisation of our environment."

5. Conclusions

The degrees in the area of communication that are offered in Spanish universities (Audiovisual Communication, Journalism and Advertising and Public Relations) are configured on the basis of the guidelines established by the ANECA in 2005. However, given the technological and social changes that have occurred in recent years as a consequence of the digitisation of the communication ecosystem, it becomes necessary to review the status of the competencies of the communication sector and to adapt the curricula in this regard.

Interviewees generally associate adaptation to the digital environment with motivational and personal aspects, i.e., as if the need to adapt to this new environment had to be the result of self-learning and self-motivation, instead of pointing out the people and institutions responsible for the possible deficiency of the Spanish university system, which has not been able to meet this need by implementing it as a specific part of its degrees.

Among the most outstanding aspects of the interviews are job versatility, digital specialisation and flexibility, understood as the capacity to adapt to changes and to the environment. According to Scolari et al. (2008), the main function of versatility is to apply all the competencies in the treatment of information in different formats and languages. Adaptive capacity is rather associated with the idea to be prepared for change and with the constant transformation of the communication sector, especially due to the technological evolution. In terms of digital specialisation, the traditional competencies remain (critical capacity, proficiency in native and foreign languages, creativity, teamwork, organisation and general knowledge), but the need to acquire new competencies closely linked to the digital sector arises (multimedia competencies, real-time transmission and production of information and news, expertise in social networks, mobile technology knowledge, interactivity, etc.).

With regards to competencies, it is worth noting that in general all of them have been valued positively (above the average). However, there is some consensus among respondents with respect to what are the most and least important competencies for the exercise of the profession within the field of Digital and Interactive Communication. The most pragmatic and attitudinal competencies are better valued than those competencies related to historical and theoretical knowledge in the field of communication. The most valued competencies are related to adaptation to changes, autonomous learning, digital expertise, creativity and teamwork.

In this sense, the low degree of importance assigned to the theoretical competencies and the consideration that professional profiles in IDC should be rather technical leads us to question what impact could this have not only on the type of college education that the sector requests (which is increasingly resembles postgraduate degrees), but also, and above all, on the generation of quality content. How do we expect our future professionals to have critical capacity, adaptation to change and versatility if we do not provide them with theoretical competencies?

The results are in the line with those obtained by other authors (Livingstone, 2011; Buckingham, 2007b) who confirm the fact that the communication sector is changing towards a markedly digitised approach. Therefore, new ICT should take greater role in the competencies considered in

communication degrees, and for this reason the ANECA should upgrade its White Paper and the Spanish higher education system should consider the introduction of a specific degree in Digital Interactive Communication.

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6. References

ANECA (2005). Libro blanco de los Títulos de Grado en Ciencias de la Comunicación. Available at http://www.aneca.es/media/150336/libroblanco_comunicacion_def.pdf (15 March 2017).

Aslinger, B. & Huntemann, N.B. (2013). Digital media studies futures. *Media, Culture & Society, 35* (1), 9-12.

Aymerich-Franch, L., & Fedele, M. (2015). La implementación de los Social Media como recurso docente en la universidad presencial: la perspectiva de los estudiantes de Comunicación. *REICE*. *Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, 13(1), 19-33.

Barry, M., & Doherty, G. (2016). What we talk about when we talk about interactivity: Empowerment in public discourse. *New media & Society*, 19(7), 1052-1071.

Brinkmann, S. (2013). *Qualitative interviewing*. Oxford: Oxford university press

Buckingham, D. (2003). *Media education: literacy, learning and contemporary culture*. Cambridge: Polity.

Buckingham, D. (2007a). *Beyond technology: children's learning in the age of digital culture*. Cambridge: Polity.

Buckingham, D. (2007b). Media education goes digital: an introduction. *Learning, Media and Technology*, 32 (2), 111-119.

Cerón, M. C. (2006). Metodologías de investigación social. Santiago de Chile: LOM.

Dezuanni, M. (2014). The building blocks of digital media literacy: socio-material participation and the production of media knowledge. *Journal of Curriculum Studies*, 47 (3), 416-439.

Ferrés, J. & Masanet, M-J. (Eds.) (2015). *La educación mediática en la universidad española*. Barcelona: Gedisa.

FTI-AMETIC (2011). Perfiles profesionales más demandados en el ámbito de los contenidos digitales en España 2012-2017. *Madrid: Fundación Tecnologías de la Información - Ministerio de Empleo y Seguridad Social*.

García-Gutiérrez, J. (2013). Aproximación ética a la competencia digital. Los niveles de uso y sentido en ámbitos educativos virtuales. *Teoría de la Educación. Educación y Cultura en la Sociedad de la Información*, 14(3), 121-145.

García-Ruiz, R., Ramírez-García, A. & Rodríguez-Rosell, M. M. (2014). Media Literacy Education for a New Prosumer Citizenship. *Comunicar*, 22(43), 15-23.

Gee, J.P. (2010). New Digital Media and Learning as an Emerging Area and "Worked Examples" as One Way Forward. Massachusetts: The MIT Press.

Gómez, M., Roses, S. & Farias, P. (2012). El uso académico de las redes sociales en universitarios. *Comunicar*, 19(38), 131-138.

Ha, L., & Yun, G. W. (2014). Digital Divide in Social Media Prosumption: Proclivity, Production Intensity, and Prosumer Typology among College Students and General Population. *Journal of Communication and Media Research*, 6(1), 45-62.

Jenkins, H., & Deuze, M. (2008). Convergence culture. *Convergence: The International Journal of Research into New Media Technologies*, 14(1): 5–12.

Livingstone, S. (2011). If everything is mediated, what is distinctive about the field of Communication? *International Journal of Communication*, 5, 1472–1475.

Livingstone, S. (2012). Critical reflections on the benefits of ICT in education. *Oxford review of education*, 38(1), 9-24

McMillan, S.J. & Morrison, M. (2006). Coming of age with the internet: A qualitative exploration of how the internet has become an integral part of young people's lives. *New Media & Society*, 8 (1), 73-95

Metzger, M.J. & Flanagin, A.J. (2008). *Digital Media, Youth, and Credibility*. Massachusetts: The MIT Press.

Preston, P., Kerr, A. & Cawley, A. (2009). Innovation and Knowledge in the Digital Media Sector. *Information, Communication & Society, 12* (7), 994-1014.

Romaní, J. C. C. (2009). El concepto de tecnologías de la información. Benchmarking sobre las definiciones de las TIC en la sociedad del conocimiento. *Zer: Revista de estudios de comunicación*, 14(27), 295-318.

Salaverría, R., & Avilés, J. A. G. (2008). La convergencia tecnológica en los medios de comunicación: retos para el periodismo. *Trípodos. Facultat de Comunicació i Relacions Internacionals Blanquerna*, (23), 31-47

RLCS, Revista Latina de Comunicación Social, 73 – Pages 331 to 351 [Funded] [Research] | DOI:10.4185/RLCS-2018-1258en | ISSN 1138-5820 | Year 2018

Sanchez-Sanchez, C., Fernández-Cavia, J., & Roca-Cuberes, C. (2016): "Competencias y perfiles profesionales en publicidad: hacia una reestructuración de los estudios de grado". In M. Perlado Lamo de Espinosa & C. Cachán Alcolea (Eds.), *Competencias y perfiles profesionales en el ámbito de la comunicación* (pp. 55–66). Madrid: Dykinson.

Scolari, C. (2016). Alfabetismo transmedia. Estrategias de aprendizaje informal y competencias mediáticas en la nueva ecología de la comunicación. *Telos*, 103, 1-8.

Scolari, C. A., Micó Sanz, J. L., Navarro Güere, H., & Pardo Kuklinski, H. (2008). El periodista polivalente. Transformaciones en el perfil del periodista a partir de la digitalización de los medios audiovisuales catalanes. *Zer. Revista de Estudios de Comunicación*, 13(25), 37-60.

USQUID (2015). *Informe per a una possible implantació d'una línia d'estudis en comunicació digital interactiva*. Departament de Comunicació, Universitat Pompeu Fabra.

Zerfass, A., Moreno, Á., Tench, R., Verčič, D., & Verhoeven, P. (2017). European Communication Monitor 2017. How strategic communication deals with the challenges of visualisation, social bots and hypermodernity. Results of a survey in 50 Countries. Brussels: EACD/EUPRERA, Quadriga Media Berlin.

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