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Abstract

Educating Journalism Students About News Archives: A Global Comparison with Special Focus on Spain and the United States

Journalists and news archivists are natural allies. Journalists require previously published reporting as context for their new stories. Archivists ensure that material is preserved for future retrieval. Local news archives serve as a cultural, legal, economic, and genealogical resource for their communities. Now, the archiving function in news organizations is relegated to information vendors with little input from journalists. Rarely are journalism and archiving coupled in programs that train future professionals.

This article explores the current state of journalism and library science education globally and suggests ways to strengthen education in news archiving in these programs.

Keywords: news archives; library science education; cur r iculum revision; Spanish journalism education; comparative journalism education

Educating Journalism Students About News Archives: A Global Comparison with Special Focus on Spain and the United States

Journalists and news archivists are natural allies. Journalists require previously published reporting or compiled data as context for the story on which they are currently working. Archivists are charged with ensuring that the material for which they are responsible is preserved and cataloged for future retrieval and use. It is a virtuous circle - fresh reporting feeds the archive which feeds the needs of journalists reporting fresh news. Local news archives also serve as a cultural, legal, economic, historical and genealogical resource for their local communities. (Hansen & Paul, 2017)

However, over the past decade the archiving function in news organizations has been outsourced to information vendors with little to no protest on the part of the journalists who rely on thorough and efficient access to past news content. Whether it is the archive of the print newspaper, the analog or digital audio or visual files from radio and television, the voluminous content found on any news organization's website, or any of the other manifestations of news organizations' output (social media posts, user comments, etc.), the news archive has been relegated to a position of low (or non-existent) standing in the competition for staffing and funding.

We can think of journalism and archiving as two ends of a process which, at its start, informs the present and, at its end, preserves for the future. News organizations have both an economic incentive and a cultural obligation to preserve their material for

their own purposes and for posterity. But rarely are journalism and archiving coupled in the programs that train future professionals and practitioners.

This article explores the current state of journalism and library/information science education to see where (or if) there is an awareness of and sensitivity to the importance and value of news archiving presented in journalism programs, and how the special needs of archiving journalistic content are addressed in library/information science programs. The article also suggests ways to strengthen education in news archiving in these programs.

The Global Case

To examine how much collaboration exists between university-based journalism education and library/information science education globally, this project used the 2016 Academic Ranking of World Universities to identify the top 200 universities worldwide.

¹ For each of the top 200 universities, the authors determined from university websites or other official documents whether that institution had a journalism B.A. and/or M.A. program (excluding theoretically-based communication studies-type programs), and whether that institution had a B.A. and/or M.A. library/information science program.

Worldwide, 147 institutions among the top 200 had a journalism program and 53 institutions had a library/information science program; 45 had both.²

For the universities that had degree programs in one or both of these disciplines, the programs of study and actual coursework were examined in detail to determine whether any attention was devoted to archival issues for journalistic content. Where possible, the authors examined actual course syllabi when an institution's curriculum in either discipline appeared to include a course that might address archival issues.

With several exceptions for journalism coursework devoted to the preservation and archival concerns of visual information (photos, moving images),³ there were no institutions that included coursework in their journalism program that specifically addressed issues surrounding archival concerns of journalistic content.

Among the 53 institutions with library/information science programs, 37 had at least one course that addressed archival issues more broadly, and many of those programs included entire tracks on archival management and preservation of print and digital materials. King's College in London offered a course titled "Digital Asset Management in Broadcast Media," but with no mention of broadcast news. Just one institution, The School of Information Sciences in the College of Communication and Information at the University of Tennessee, included a graduate-level course ("Digital Curation") that specifically addressed *news* archiving. An optional assignment in that course, titled "Digital Curation in the News," encouraged students to examine the issues and challenges surrounding digital news archiving.

Of the 45 top-ranked universities globally with *both* journalism and library science programs, with the few exceptions noted here, there was no evidence of coursework in either program that addresses the concerns of the other discipline. Journalism education in Spain, however, follows a very different path.⁴

The Spanish Case

We focus on Spain in this article because journalism education there is unique in its universal incorporation of news archiving in curricula from its inception.⁵ In Spain, university-based training in journalism at legally recognized university faculties⁶ did not start until 1971. The first program at *Facultad de Ciencias de la Información* (Faculty of

Information Science) at the Complutense University of Madrid,⁷ included a course called *Documentación*, which, in Spain, refers to Library and Information Science. Issues in documentation have been present in most Spanish journalism curricula since 1971. There is a backstory to how documentation became a staple of Spanish journalism programs.

Professional journalism training was offered by *El Debate*, a Catholic newspaper, as early as 1926. (Real, 2012, p. 120) The newspaper's interest in supporting documentation training in journalism began in 1911 when *El Debate* established for its journalists the first documentation service in Spanish media. The first Spanish periodical library, *Hemeroteca Municipal de Madrid*, opened to the public in 1916. Attention to preservation of and access to journalistic publications generated interest in the possibility of university training in journalism and documentation.

But these initiatives were stopped with the outbreak of the Spanish Civil War in 1936. After consolidating power, General Francisco Franco approved a Press Law in 1938 to control media and established in Madrid the first Escu*ela Oficial de Periodismo* (Official Journalism School.) The school began its "official" training in 1942.

From its inception, even this government-controlled program contained training in the importance of documentation for journalists. (Tapia, 2001, p. 234) A 1942 course *Información y reportajes* (Information and reports) included a lesson covering "Periodismo indirecto. recoger, cribar, comprobar. El archivo y su manejo" (Indirect journalism: gathering, filtering, verifying. The archive and its use). A 1955 course titled Periodismo Gráfico (Photojournalism) included material about photo archives and their criteria for selection and classification. In 1961, the course Seminario de Redacción

(Writing Seminar) included topics like *Administración de datos y antecedentes*(Administration of data and records) and *Documentación previa* (Background documentation). The faculty member teaching those courses, Enrique de De Aguinaga, stated:

"When a newspaper starts to grow, it needs to have an archive, what we are calling now 'the paper brain'. But it should not be an independent thing, on its own, that suddenly converges and says 'great, let's be friends'. It is an intrinsic function in Journalism. As fish develop fins, Journalism naturally develops Documentation" (Tapia, 2001, p. 236).9

According to Tapia (2001, p. 241), allusions to Documentation were made in all the courses taught in 1952 at the official government journalism schools. And beyond official schools, other journalism programs were created by private and church initiatives in the fifties and sixties, including *Instituto de Periodismo* (Journalism Institute) in Navarra, in 1958, and *Escuela de Periodismo de la Iglesia* (Church Journalism School) in Madrid, in 1960 (Real, 2012, p. 121). The field of Documentation was also present in the curriculum of these last two Journalism schools (Tapia, 2001, p. 241-248).

In 1963 some content linked to news archives was included in the course *Técnicas del Periodismo Impreso* (Print Journalism Techniques). The course covered the topic "El archivo. Su organización. Una redacción orientada hacia el pasado en función de la actualidad inmediata" ("The archive. Its organization. A newsroom oriented towards the past for breaking news").

In 1965 attention was given to specific training of news librarians. A seminar titled *Curso Monográfico de Hemerografía* (Monographic course in Hemerography) — later named *Normas de Archivo y de Análisis Hemerográfico* (Archive Rules and Hemerographic Analysis) — focused on the structure and dynamics inside the modern documentation service — news archives, libraries, photo archives, audio archives (Tapia, 2001, p. 238).

After passage of the new Press Law in 1966, a new curricula for the Journalism Official School was approved in 1967 which bolstered journalism studies and established journalism training as a major requiring four years of education. While there had been attention to documentation in journalistic training in the past, the increased coursework required in these new programs allowed inclusion of a specific course in the field of documentation. The course *Hemerografía y técnicas de documentación informativa* (Hemerography and techniques for news documentation) focused exclusively on the special considerations of news libraries, archives and specialized media libraries. (Ministerio de Información y Turismo, 1967, p. 5821; Tapia, 2001, p. 241).

This interest in addressing the needs of media archiving in university programs was concurrent with a rise in the 1960s of news organizations establishing their internal media archives. In 1967 *Televisión Española* (Spain's first TV station, launched in 1956) established the first TV documentation service to preserve its broadcasts. Many other Spanish media, mainly newspapers, began to establish documentation services during the seventies, such as *El Correo de Andalucía*, in 1975. When *El País* began publication in 1976 it had a news documentation service in its newsroom.

In 1970, the General Law of Education regulated the incorporation of Journalism studies into Spanish universities (Jefatura del Estado Español, 1970, p. 12544) and a 1971 decree regulated the creation of legally recognized university faculties for media studies, with a five-year Bachelor of "Ciencias de la Información" (Information Sciences¹0), organized in two stages —a three-year general program and a two-year more specific program —as well as three sections: Journalism, Visual and Auditory Images, and Advertising (Ministerio de Educación y Ciencia, 1971, p. 14944). Thus, two new faculties opened in Spain in 1971: the Faculty of Information Sciences of the Complutense University of Madrid and the Faculty of Information Sciences of the Autonomous University of Barcelona (ANECA, 2007, p. 100). These new university schools replaced the Journalism Official Schools, which disappeared by December 1975 (Tapia, 2001, p. 241). At the same time, the already existing Navarra Journalism Institute became the officially-recognized Faculty of Information Sciences of the University of Navarra in 1971 (Barrera, 2002).

From the beginning of university journalism programs in Spain, specific courses in Documentation have been offered. From 1971 until 1974, the courses linked to the field of Documentation were those inherited from the old non-university journalism schools. However, in the first long-term journalism university curriculum designed in 1975 by the Spanish Ministry of Education and Science for the Bachelor of Journalism degree program taught at the Faculty of Information Sciences of the Complutense University of Madrid, there was one required course titled *Documentación* (Documentation). It was taught in the fifth and last year of the Bachelor (Ministerio de Educación y Ciencia, 1975, p. 22123).

New journalism studies programs were opened in other Spanish universities during the eighties¹¹ and, due to this boom, in 1991 Spain established national control and homogenization of university media curriculum at all these faculties (Real, 2012, p. 122). The programs now offered three different five-year Bachelor degrees for: *Periodismo* (Journalism), *Comunicación Audiovisual* (Audiovisual Communication) and *Publicidad y Relaciones Públicas* (Advertising and Public Relations). In all of them, there was a required course titled *Documentación Informativa* (News Documentation.) (Ministerio de Educación y Ciencia, 1991, p. 32903).

New universities established throughout the 1990s started offering journalism programs using the approved curriculum. ¹² In all of them, specific courses in Documentation were taught. There were some differences in the curriculum which all these universities offered to their stude nts. For example, starting in 1993 the University of Seville offered a four-year Bachelor of Journalism, with not just one but two specific courses linked to the field of Documentation: *Documentación Informativa* (Media Documentation ¹³), in the second year, and *Documentación Periodística* (Journalistic Documentation), in the fourth year (Ministerio de Educación y Ciencia, 1993, p. 31281-31283).

At the same time, the first three Spanish private TV stations went on the air between 1989 and 1990, joining regional public TV stations that had been created during the eighties. Jobs increased for the students who finished their Journalism degrees and media organizations established or expanded their news archive operations employing the appropriately-trained workforce.

In 2002, the Journalism university curriculum was reshaped again in most

Spanish universities, characterized by less theoretical and general content. More Spanish universities would offer a Bachelor of Journalism starting this year. ¹⁴ All these universities included specific Documentation courses inside their Journalism curriculum. ¹⁵ Other existing programs, like the one at the Complutense University of Madrid, increased from 4 to 6 U.S. course credits ¹⁶ — the required course *News Documentation* in 2002 and two new optional 3 credit courses: *Journalistic Documentation* and *Legal Documentation* (Ministerio de la Presidencia, 2002, p. 26034 and 26039).

Between 2008 and 2010 (Sanchez García, 2016, p. 130) there was yet another important change in Spanish Journalism curriculum — and, in fact, in all university curricula (Ministerio de Educación y Ciencia, 2007) — with the adoption of the European Higher Education Area. After the adoption all Bachelor of Journalism programs in Spain became 4-years long —120 U.S. credits — with a wider diversity of courses and more semester-long courses (instead of annual.) In addition, universities had more autonomy in shaping their own curricula (Sanchez Garcia, 2016:135). As a result, Journalism programs focused more on professional practice and reduced the multidisciplinary content that was typical when there was more connection with the social sciences and humanities. (Sánchez García, 2016:138).

This new Journalism curriculum was a setback for the field of Documentation, with a significant reduction in the number of courses and hours of training. For example, in the Faculty of Communication at the University of Seville, the two required courses News Documentation (4 credits) —and Journalistic Documentation — (3 credits) — inside the Bachelor of Journalism, turned into one 4 credit required course (Journalistic

Documentation) and a 4 credit optional one: Recursos Documentales Periodísticos

(Documentary Resources for Journalists). The two required Documentation courses offered inside the Bachelor of Audiovisual Communication —7 credits in total — turned into just one 4 credit optional course (Audiovisual Documentation). And the two Documentation courses inside the Bachelor of Advertising and Public Relations —a 4 credit required one and a 3 credit optional one — were dropped altogether. Other significant examples of this reduction can be found in the Bachelor of Journalism taught in the Complutense University of Madrid: from 12 credits to 4 credits of Documentation training and from three specific Documentation courses — one required and two optional —to just one course, required and titled News Documentation.

Currently, there are 19 public universities in Spain teaching a Bachelor of Journalism. In each, at least one specific Documentation course is offered to their students and future journalists, with 4 credits of training. And four of these universities offer two specific courses about this science in their curriculum: the University of Murcia (8 credits of required training), the University of Seville (4 credits required and 4 credits optional), the University Carlos III in Madrid (2 credits required and 4 credits optional) and Pompeu Fabra University (2.5 credits required and 2.5 credits optional).

Analyzing the 23 Documentation courses taught in the Bachelor of Journalism in these 19 Spanish public universities, we can summarize the most common contents of these courses:

- News, photo and video libraries and archives in the documentation services of media organizations: newspapers, radio and TV networks and digital media.
- The work done by staff in documentation services: selection of documents,

cataloging/formal description, indexing, content analysis and dissemination to users. Media asset management.

- Searching and retrieval of information: natural language versus controlled vocabulary. The thesaurus.
- History and evolution of Documentation.
- Databases.
- Information resources for journalists.
- Data journalism this topic has recently been included in some programs and
 the University of Seville will rename, for the academic year 2017/2018, the
 course Documentary Resources for Journalists to Documentary Resources and
 Data Journalism.

However, the recent reduction or elimination of many Documentation courses inside Spanish university media studies curricula, as well as the decrease in the number and dimension of Documentation Services (news archives) in Spanish newspapers in the last several years (Melendez-Malavé & Hirschfeld-Suárez, 2016:612; Recio & Edo, 2015:420), has Spanish scholars in the field worried.

The US Case

In the United States, there was early attention to news archiving at some institutions with journalism programs. A faculty member in the School of Journalism at the University of Minnesota in the late 1920s and early 1930s, Robert W. Desmond, was also a member of the newly formed Newspaper Group of the Special Libraries Association. He developed a course of instruction in newspaper library methods and advocated for more attention to the news library among newspaper publishers and

editors. (Desmond, 1929; Desmond, 1931). His book, *Newspaper Reference Methods* (1933) was used in a course taught at the University of Minnesota on that topic during the 1930s. New York University offered a course on newspaper reference methods during that time period, and Desmond received inquiries about his curriculum and his book after it was published from faculty in the journalism programs at the University of Illinois, the University of Wisconsin and Michigan State. (Desmond correspondence).

Desmond's book and the curriculum he shared brought attention to the importance of a news organization's archival responsibilities. However, the course at Minnesota was dropped from the curriculum after Desmond returned to full-time newspaper work in the late 1930s and eventually moved to the position of Chairman of the Department of Journalism at the University of California-Berkeley. As journalism education at the university level expanded in the U.S. through the rest of the 20th century, there was no formal attention to the issue of news archiving to rival the early efforts that Desmond advocated. The University of Minnesota and several other institutions introduced a course on gathering and evaluating information for journalism Students starting in the early 1980s.¹⁷ But the specific concerns of the news archive as a financial and cultural asset were not the focus of these courses.

Journalism curricula developed an expanded focus on management of media organizations starting in the 1980s. However, once again, there was scant attention paid to the institutional value of the news archive as a source of revenue and as a valuable organizational asset. If news libraries were mentioned at all, it was only after the information industry (Lexis/Nexis, NewsBank, etc.) started to ink contracts with news publishers for their now-digital backfiles of the print newspaper. The benefits of those

contracts accrued primarily to the information vendors rather than to the news organizations that licensed their content. Some media management literature addressed the growing opportunity for news organizations to monetize their archival materials, but mostly as an afterthought or as an aside. (Hollifield et al., 2016; International Journal on Media Management, 2000; van Kranenburg & Ziggers, 2013) Possible Solutions

Journalism educators in the U.S. might look to the example of Spain. One way to address the lack of attention to news archiving is to consider opportunities to build on existing administrative and curricular strengths. The authors identified the 12 institutions in the U.S. that offer both a journalism and a library/information science degree at the undergraduate and/or graduate level *where both of those units or schools are housed in the same college*. The assumption was that in those cases, there might be more incentive and it might be easier to incorporate a focus on the archival issues of news because the schools or departments were admininistratively linked and might share faculty expertise or develop joint coursework.

However, for those 12 institutions that housed the journalism and the library/information science programs in the same college, there was little evidence of any collaboration or cross-pollination among the two disciplines around the issue of archiving news. The University of Arizona did include information on the website for its School of Information in the College of Social and Behavioral Sciences about the option of a *dual* Master's degree in Library and Information Science and a Master of Arts degree in Journalism. However, the School of Journalism website did *not* mention that dual degree option. Students who want to pursue that dual degree need to be admitted

to both programs and build their own program of study to make the connections. No specific courses address news archiving as its own subject of study.

Given the constraints on curriculum expansion, especially for ACEJMC-accredited programs that must abide by credit limits for majors, there is little chance that news archiving will be addressed in a stand-alone course as it is in Spanish curricula. However, there is no reason why journalism programs might not include a unit on the importance and function of the news archive in appropriate courses. Because many journalism programs are housed at institutions with a library/information science program at the same university and even in the same *college*, there is an opportunity to work collaboratively with library/information science colleagues on units that address the types of issues that are covered in the Documentation courses in Spain.

There are three topics where library/information skills should intersect with journalism training: 1) Information seeking and evaluation (information literacy); 2) Journalists' role in providing information to help aid future archival preservation and retrieval (metadata tagging, etc.); and 3) Management training on the value of archives, resources and staffing needed, monetization potential and related managerial topics such as contract negotiation with information vendors. The first two topics could be included in introductory or intermediate-level skills courses for text, audio and moving image journalists (Basic Reporting, Public Affairs Reporting, Investigative Reporting, Database Journalism, etc.). The last topic could be included in media management courses.

For example, any introductory course in the journalism curriculum could devote time and instruction to information literacy issues - where does information come from?

how do you identify and evaluate the information appropriate for your use? what can be trusted and can/should be shared with others (including a potential audience of millions)? what technical and conceptual skills are necessary to properly organize, preserve and maintain digital information files and systems? There are instructional materials readily accessible for this type of unit, and journalism faculty themselves can certainly address these topics (and many do) (Hansen & Paul, 2015).

A reporting course could include a unit on the use and importance of the media organization's own backfiles and archive (which many courses now do, of course) but could expand on that with specific instruction on selection of what to archive in the first place, version control, metadata tagging, SEO optimization, digital filing strategies, website and social media linking techniques and related topics so budding journalists understand *how* that archive they rely on is created and maintained, with their explicit input as they generate their stories for publication and distribution. Again, the necessary skills and conceptual practices for maintaining and preserving digital information files and systems (now the primary means for producing and distributing information by mass communicators) are a key component of education for the modern communications professional.

Media management courses could include a unit that specifically addresses the news archive's monetary value as an important financial (and cultural) asset to the organization, and strategies to make better use of that content. Instruction on negotiating contracts for licensing the backfiles, staffing necessary to maintain the databases and related issues are crucial. One anecdote illustrates how the lack of such training now affects news operations. A newspaper publisher came back from a

conference and told the (sole remaining) news librarian to work with a backfile vendor to increase the newspaper's monetization of that asset. The problem, as the librarian pointed out to the publisher, was that the news organization had an exclusive contract with a different vendor and could not consider other options. Future media managers can and should be much more knowledgeable about archival issues and concerns, especially since so much of their early digital news content is already gone. (Hansen & Paul, 2017)

The project reported on here demonstrates that there is an opportunity to follow a successful model in place for more than 40 years in Spain for the education of future journalists and media managers in the U.S. Especially for those journalism programs situated in universities with a libra ry/information science program on campus, the expertise and resources to develop specific units in existing courses are already available. The only obstacle is raising awareness about the issues and opportunities among administrators and faculty. Because traditional news archives with specialized staff trained for that role are disappearing, it is even more important for all aspiring journalists and news managers to know how to future-proof their own work.

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Notes

¹ ARWU uses six objective indicators to rank world universities, including the number of alumni and staff winning Nobel Prizes and Fields Medals, number of highly cited researchers selected by Thomson Reuters, number of articles published in journals of Nature and Science, number of articles indexed in Science Citation Index - Expanded and Social Sciences Citation Index, and per capita performance of a university. More than 1200 universities are actually ranked by ARWU every year and the best 500 are published. Retrieved from http://www.shanghairanking.com/aboutarwu.html The total number of institutions in the top 200 used for this study were distributed across the world as follows: North America 111; Europe 63; Asia 14; Australia 11; Africa 1; South America 0.

- ² North America had 91 institutions with journalism programs and 36 institutions with library/information science programs. Europe had 35 institutions with a journalism program of study and 9 with a library/information science program. Asia had 10 institutions with a journalism program and 5 with a library/information science program. Australia had 10 institutions with a journalism program and 3 with a library/information science program. The one African institution in the top 200 had a program in journalism.
- ³ For example, New York University offers a Master of Arts degree program in Moving Image Archiving and Preservation through its Tisch School of the Arts. Similar programs exist worldwide for preserving and archiving photographic and moving images.
- ⁴ Only one Spanish university with a journalism program was included in the ARWU list of the top 200 institutions: Pompeu Fabra University using the ARWU list limited the sample of journalism programs discussed here; other successful models may be found in Western countries whose institutions were not included in that ranking.

For a comprehensive history of the development of journalism education in Spain, see Barrera and Vaz (2003). The modern curriculum in both Spain and the U.S. grows out of a humanities and social sciences academic tradition, combined with professional training.

⁶ Although Navarra Journalism Institute has been a part the University of Navarra since 1958, it was not recognized as a university faculty within the Spanish legal framework until November 8, 1971 (Barrera, 2002). Rather it was a "premonitory faculty" (Vigil y Vázquez, 1987, p. 153).

The curriculum was regulated by the Spanish Ministry of Education and Science (Ministerio de Educación y Ciencia, 1971).

⁸ Public news libraries supported by the Spanish Government or by regional or local governments, called *hemerotecas*, have existed since 1916. They are accessible to all citizens - different from the news libraries inside the documentation services of Spanish

media, which are private. For example, the *Hemeroteca Municipal de Sevilla* has an international newspaper collection dating back to 1661, freely open to the public.

Domínguez-Delgado translations throughout.

- ¹⁰ Although *Information Sciences* is the literal translation, "Ciencias de la Información" in Spain is not linked to computers but to mass media. The term *Information* has different meanings in English and Spanish; the Spanish usage adopted in the seventies was due to the influence that France where the term "Sciences de I Information" was used exerted in Spain in the late 1960s and early 1970s. However, most Spanish schools for media studies with only a few exceptions have adopted later names like School of *Communication or Communication Sciences*, avoiding the use of the confusing term *Information*.
- ¹¹ The University of the Basque Country (in 1981), the Pontifical University of Salamanca (in 1988), the University of La Laguna (in 1989) and the University of Seville (in 1989).
- ¹² The University of Santiago de Compostela (in 1991), Pompeu Fabra University and the University of Malaga (in 1992), the University Carlos III of Madrid (in 1996), and the University of Valencia and King Juan Carlos University (both in 2000).
- ¹³ In Spain, the more general concept "Documentación Informativa" (Media Documentation) is defined as the application of Documentation Sciences to mass communication and media companies (López Yepes, 1997, p. 14), while "Documentación Periodística" (Journalistic Documentation) is a specialization inside Media Documentation defined as the application of Documentation Sciences to Journalism (López Yepes & Ros Garcia, 1993, p. 129-131.
- ¹⁴ The University of Murcia (in 2002), the University of Valladolid (in 2003), and the University of the Balearic Islands and Miguel Hernandez University (both in 2005). The case of the University of Murcia is unique in Spain, since this bachelor and other ones linked to media are taught since 2002 by the same faculty as its official degrees in Documentation, sharing the training in these two sciences at the same school: *Facultad de Comunicación y Documentación* (Faculty of Communication and Documentation).
- 1' Thanks to the importance which Documentation had in Spanish journalism and media studies schools since their creation, this line of scholarship has been robust in Spain since the seventies, with many authors in this field. See for example the work of López Yepes, López-Hernández, García Gutiérrez, Fuentes i Pujol, Galdón López, Del Valle Gastaminza, Guallar, Codina Bonilla, Moreiro, Sánchez Vigil, Tapia López or Rubio-Lacoba. Many specific journals in this field also were created, such as: *Documentación de las Ciencias de la Información, Anales de Documentación, Scire, Revista Española de Documentación Científica, El Profesional de la Información, Revista General de Información y Documentación, Cybermetrics or Ibersid, among many others.*

¹⁶ All Spanish course hours are translated in this article into U.S. course credits.

¹ Books published by faculty at those institutions teaching such a course included Ward, J. and Hansen, K. A. (1987) *Search Strategies in Mass Communication.* New York, NY: Longman; and Kessler, L. and McDonald, D. (1987) *Uncovering the News.* Belmont, CA: Wadsworth.

¹⁸ The chapter on Innovation includes a brief discussion on pp. 150-151 about expanding the value chain to add value to existing products, repackaging those products and taking advantage of innovation in technology. This *could* describe how the news archive could add value, but the word "archive" does not appear anywhere in the book.

¹ These articles early in the digital news revolution danced around the possibilities for the news archive but didn't address them directly.