The Radio Dramatization of Educational Contents: A Higher Education Experience

La dramatización radiofónica de contenidos educativos: Una experiencia universitaria

ABSTRACT
This research presents the results of the first pilot test of a new teaching method called journalism-based learning, from the Public Relations Theory and Techniques course of the Advertising and Public Relations degree at the Universitat Oberta de Catalunya (UOC). Journalism-based learning consists of applying journalistic methodology to university learning contents. Journalism-based learning reveals a new media pathway that focuses on its teaching and entertaining function rather than its duty to inform. The UOC has initiated these journalism-based learning projects to provide students with new learning contents through radio drama. The application of this method to life-long learning transforms radio into a key element, since it enables the required flexibility (in space, time and of the appliance) to be maintained. In other words: mobility and portability. This article explains the foundations of journalism-based learning, and shows the results and conclusions of the first application to online university teaching. The method was positively received by students, thanks in particular to its entertainment function, and its contribution to easing the study of the educational content.

RESUMEN
Esta investigación expone los resultados de la primera experiencia piloto en la asignatura «Teoría y técnicas de las relaciones públicas», de la licenciatura en Publicidad y Relaciones Públicas de la Universitat Oberta de Catalunya (UOC), un método docente que hemos denominado periodismo para el aprendizaje (journalism based learning), a través del cual se han dramatizado los contenidos docentes universitarios con una metodología periodística. De este modo, el periodismo para el aprendizaje muestra una nueva vía de acción de los medios de comunicación en su función formativa y de entretenimiento, más que en su labor informativa. Los primeros proyectos de periodismo para el aprendizaje los ha puesto en marcha la UOC a través de la dramatización radiofónica para proveer nuevos contenidos formativos a sus estudiantes. La aplicación de este método a la formación a lo largo de la vida sitúa a la radio como un elemento fundamental, dado que permite mantener el requisito de flexibilidad (espacial, temporal, de dispositivo), es decir, movilidad y portabilidad. Este artículo explica los fundamentos del periodismo para el aprendizaje y revela los primeros resultados y conclusiones de su aplicación a la formación universitaria virtual, entre las que destacan la recepción positiva por parte de los estudiantes gracias, especialmente, a su función de entretenimiento, así como su contribución a facilitar el estudio de los contenidos formativos.

KEYWORDS / PALABRAS CLAVE
Journalism based learning, radio communication, higher education, entertainment, dramatization.
Periodismo para el aprendizaje, comunicación radiofónica, educación universitaria, entretenimiento, dramatización.

◆ Ph.D. Lluís Pastor Pérez. Lecturer of Rhetoric of Communication Studies at the Universitat Oberta of Catalonia in Barcelona (Spain) (lpastor@uoc.edu).
◆ Ph.D. Jordi Xifra Triadú. Lecturer of Corporate Communication Strategies. Communication Department of the Faculty of Communication at the Universitat Pompeu Fabra of Barcelona (Spain) (jordi.xifra@upf.edu).
1. Introduction

Entertainment and high attraction have become key elements in the new paradigm of the communicator in the age of the information society. In fact, though on a different scale, this has ever been the case, and from the sophists to the present day (Pastor, 2006) it has always been the most attractive and entertaining stories that have imposed themselves. Today, however, it would seem that entertainment has become the basic foundation for the new paradigm of communication.

If we believe that the media not only inform the adult population, but also educate them (Ricoy, 2004), the impact of the new entertainment paradigm may extend much farther than originally thought. If the media educate, perhaps they may also be able to help change the concept, processes and content of the education schools and universities provide for students. This is the aim of our article: to highlight the basic principles of journalism-based learning or, put in another way, the new concept of lifelong learning through the entertainment paradigm, using mass media techniques and journalistic methods.

On this point, it is considered that journalistic methods of dealing with information play a fundamental role. Adults recover most of the information from their environment via the media, which have developed a method of treating the currentness of high attraction for the audience they are aimed at. Although the radio resource used in this experiment is not interactive, and despite it being developed and applied in a university environment that is (the UOC), it is worth referring here to observations made by Cebrián Herreros (2002) regarding the fact that radio, and digital radio in particular, tends to be a form of multimedia that integrates sound, written text and image.

On the basis of the premises mentioned above and those deriving from other studies conducted on the role of the media in educating adults (Viso, 1993; Ricoy, 2002; 2006), this research analyzes a means of developing content for educational purposes through the creation of radio programs that respond to the educational aims of the teaching content and which may be accessed by means of different mechanisms and devices for storage and listening. This new content is as interesting and entertaining as a radio talkshow and, furthermore, allows issues to be addressed from the teaching curriculum, as well as being accessible on any device used for listening to the radio.

In order to produce this content it was important to understand that the media now play a new role in the society in which they operate, in line with what proposed by what is known as «civic journalism» (Perry, 2003). To this end, we have created a new working method, which we call journalism-based learning. Multidisciplinary teams of university professors, radio professionals and experts in learning content have worked together to produce this content.

The UOC, one of Europe’s largest virtual universities, was the first institution to use this new resource to allow students to improve their performance and therefore progress within a new paradigm of educational content. Indeed, the Universitat Oberta de Catalunya (Open University of Catalonia) represents a new concept of university, aimed at offering distance learning with the highest quality teaching by means of innovative pedagogical systems and the use of multimedia and interactive technologies (Universitat Oberta de Catalunya, 1998). The general profile of a UOC student is that of an adult (78% are aged between 25 and 45), who is professionally active (92%) and also tends to have personal circumstances (family, work, etc.) that makes him or her award above average value to flexibility when it comes to university study (Sangrà, 2008). It is within these educational and demographic contexts that we carried out the experience whose results are presented here.

1.1. Radio in the classroom

Even if today it is the least-used medium for social communication in education (López Noguero, 2001), a relationship can be traced back between radio and education almost to when the medium was first created. The radio has great potential for use in education, a potential which has been scarcely explored in comparison with that of other mass media.

The use of the media in classrooms tends to take two forms. On the one hand, university professors frequently tend to bring media-made products into the classroom. The extensive use of the media in this way has led to a rise in the number of experiences and guides on how to use journalistic content in the classroom, in the sense that, in the hands of a university professor, a piece of journalism illustrates and explains the world to the students in a new light.

It is clear in this first use of media in the classroom that the aim is to employ teaching methodology to exploit journalistic content. The content published by a newspaper, emitted by a radio station or television channel, or taken from the Internet, becomes a resource that the university professor uses within the framework of his or her teaching discourse.

There is, however, another use of the media that we would like to mention here. That is, the use of journalistic channels but excluding journalistic metho-
dology. This is the case with educational radio stations, such as those run by UNED (Perona, 2009), which do not contribute anything new to how classes are actually conducted. Only the channel changes. Where before there was a classroom with a university professor and his or her content and students, now there is a university professor with his or her content, a microphone and the airwaves delivering his or her voice and examples to the students, who are located in different places around the country.

In addition to the above, Perona (2009) notes three further types of educational radio found in the digital age. The first constitutes radio stations belonging to educational centers, that is, Internet radio stations created by an educational center, regardless of the type of teaching offered by the center. In the university domain these are characterized by the diversity of the programming on offer, comprising numerous programs of the most diverse genres and subject matter. The second type are the educational programs that are offered by different radio stations. And finally, the third category are radio edu-webs. Under this name, Perona (2009) includes companies that work with radio on the Internet as one of the main educational supports in the field of audiovisual communications. Our model is not intended as an addition to the aforementioned classification, however, as, among other things, it does not fit into any of the above categories. This is due to the fact that, rather than a radio program model, it is a journalistic model which affects how discourse is constructed rather than the actual technological medium itself.

1.2. The next step: civic journalism

The Eighties witnessed the emergence of the idea of creating a different type of journalism in the United States, although there is no agreement on a common name: for some, «civic journalism» (Perry, 2003), for others «public journalism» (Hoyt, 1995). We shall opt for the latter term to describe this type of journalism, which is based on the citizen’s role in the media.

Born out of the press crisis, the aim of civic journalism is to provide an alternative to traditional media, win back readers and interest them in public issues (Public Journalism Network, 2003). In other words, civic journalism proposes a fundamental change in the new relationship journalism establishes with its readers, listening to them, making them talk, believing that their interests are also the interests of those whose job it is to inform them. In fact, civic journalism aims to reach out further when it treats readers not only as readers, listeners, viewers… but also as citizens (Mongan & Tunney, 2009).

Civic journalism also facilitates interaction between editors and readers; between journalists and citizens. Helping citizens to act more effectively in their social environment generates new ties of interest between citizens and the media (Williams, 2007). The spirit of civic journalism is therefore the will to improve the community (Schaffer, 2001b), something which permeates throughout our proposal for journalism-based learning and opens new channels of development for journalistic practices in the information society.

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1.3. The journalism-based learning matrix

If we combine teaching content, the work of the journalist and the will to activate and support the community of citizens, a new result is obtained: journalism-based learning. The matrix for this type of journalism combines two concepts: the type of methodology to use in order to construct the content to make available to students, and the type of content to use.

The experiment undertaken at the UOC is aimed at significantly modifying the relationship between content type and the methodology used to teach it, until now dominated by the models presented by Perona (2009) referred to earlier. Change consists in
using teaching content (the syllabus, resources for the content the university professor has decided to teach) and applying journalistic methodology to it. In other words, converting a teaching resource into a journalistic product. Converting the relating of the teaching content by dramatizing it through journalistic storytelling and more particularly the discursive genre of the radio talkshow.

This conversion translates into content prepared by a university professor to be taught over ten teaching hours being transformed into a 38-minute radio show, which has the same capacity to attract attention as commercial radio shows, but deals with syllabus content rather than current affairs. Or, put another way, a radio show which in terms of fiction makes the timeless content of the school or university subject current. Hence the idea of the content being dramatized. It is this methodological process that we have called journalism-based learning.

2. Methodology

The content selected for researching the model was taken from the university degree subject Theory and techniques in Public Relations I, specifically, content dedicated to the strategic planning of Public Relations projects. As content that explained how professionals plan a Public Relations or corporate communications campaign, it was ideal for adaptation to the radio and radio show format, allowing the use of a timeless register, although not disconnected from current affairs, due to the fact that it is possible to use any case of business or political crisis or any public information campaign as a current newsworthy event on which to base a radio program. The practice-focused nature of university studies in Advertising and Public Relations facilitates adaption of the content to journalistic formats and registers.

The radio show was the result of one of the founding principles of journalism-based learning: the relationship between the university professor and the team of journalists. The role of the professor must consist in guiding and validating the script produced by the journalists and evaluating the final program. The journalists, or mass media, must provide the human and technical resources for producing the show (direction, script, production, presentation). Thus, together with the journalists, we designed the parts of the show and the working methodology—how to convert teaching content into content appropriate for a radio show—and evaluated the pace and tone of the program.

Consequently, in addition to the materials prepared by the teacher for the module on strategic planning, the student also had the radio talkshow as a resource. Professional journalists drafted the script for the talkshow on the basis of the content of the course module and the show was presented by a popular female radio presenter who, for the 38 minutes of the show, interviewed Public Relations professionals collaborating on the project and the university professor responsible for the degree subject.

The degree students were asked to listen to the module voluntarily—as they could not be formally required to do this—and respond to a questionnaire that combined open and closed questions. Nevertheless, in order to verify whether students used the radio program differently if the material was subject to assessment or not, it was suggested that they first do the test associated with the content for the module Strategic Planning in Public Relations using only knowledge gleaned from the radio show, and not that from the written material prepared by the professor.

The questionnaire the professor sent to students by e-mail via the virtual classroom consisted of 19 questions, 14 of them closed (questions referring to time consumed and effects on learning) and five open (referring to the relationship between the method and the idiosyncratic nature of Public Relations content).

The first block of questions in the questionnaire referred to the type of use students had made of the radio program (device listened to, number of times listened and type of listening: whole or in parts).

The second block was aimed at analyzing the time consumed by the radio program and compared the time employed to listen to it and the time employed...
reading the course materials. These were also ques-
tions aimed at ascertaining the level of comprehen-
sion of the radio programs in comparison with the course
materials provided for students.

The third block referred to three elements: the use
of radio as a resource for preparing a test, the level of
knowledge it provided and its level of interest and
attraction.

The questions in the fourth block of the question-
aire were aimed at ascertaining students’ opinion on
whether the resource aided study and whether it al-
lowed them to combine study and work, or study and
other activities undertaken by students.

Finally, questions in the fifth and final block re-
ferred to students’ level of satisfaction, the suitability
of the medium for content relating to strategic planning in
Public Relations and the possibility of extending the ini-
tiative to other subjects not confined to the field of
Public Relations but forming part of the degree course
Advertising and Public Relations.

3. Results and discussion

The university professor responsible for the sub-
ject Theory and techniques in Public Relations I sent
the questionnaire to his students during the second
semester of the 2008-09 academic year. Of the 79
students in the class, 67 answered the questionnaire
(84.8%), with only two stating that they had not heard
the radio module in full, leading to their exclusion from
the sample. In total, then, the radio module on stra-
gic planning in Public Relations projects was listened to
by 65 students, that is 82.3% of the class, a more than
significant percentage, suggesting a high level of inter-
est in this new methodology. The fact that this was
not a compulsory activity for students further confirms
this, as do responses obtained to the question regard-
ing whether they considered it a good idea to extend
this initiative to other study materials. 93.8% of stu-
dents said they did, while only four students (6.2%) did
not.

In reference to the use of the radio program, stu-

dents were asked how they had listened to it, whether
in front of the PC (that is, statically), on an MP3 device
(or similar) whilst on the move, inside a vehicle (car
CD player), or other. Although most students (58.6%)
opted not to modify the habit of their relationship/con-
nection with the classroom and therefore listened to it
in front of the PC, 32.8% listened to it on an MP3 pla-

yer or similar whilst on the move and 8.6% listened to
the module in their car CD player.

Since the beginnings of e-learning, scholars have
highlighted the fact that interaction between people
and PCs is of special relevance, due to the fact that the
PC is currently the medium for accessing the virtual
campus and is one of the resources most used in distri-
buting courses and educational content (Preece,
1994). Equally, PCs are suitable not only for present-
ing rich environments in which students may work collaboratively, but also because they provide multimedia
resources that make it possible to distribute and
present educational material in a manner that is diffi-
cult to imagine some years ago. These aspects repre-
sent a great challenge for both teachers and interface
designers (Sharp et al., 2007).

The results of our research not only demonstrate
that stated above, but also reinforce one of the found-
ing principles of journalism-based learning: mobile
learning (m-learning), the potential uses of which have
been demonstrated in recent studies (Marcos, Támez
& Lozano, 2009). New content can substitute current
content or, better still, may complement the teaching
uses for content that has been used until now. How


can we take advantage of the time students spend on
the move (public transport, private car, etc.) to provide
them with an entertaining experience involving educa-
tional content? The extended use of new digital play-
ers adds to the high impact of this content, and, as we
have said, this is confirmed by the results presented
here, 41.4% of students having listened to the module
while on the move.

This factor also influences another aspect relating
to how students listened to the radio module, as 47.8%
listened to the whole program, without any interrup-
tions, whilst 52.2% listened to it in fragments.

Implementing journalism-based learning also
means a change of language, register and format for
the new content. The new paradigm is that of enter-
tainment, but also that of attractiveness without aban-
doning key educational concepts. If the content ob-
tained through journalism-based learning is not entertai-
ning, it will not have advanced from the educational
content based on the school paradigm (Navarro,
2001).

It was therefore necessary to conduct research not
only into whether students found the new method
entertaining and attractive, but also how many times
they listened to it and how much time they invested in
it. As well as highlighting the idea of «discovery-based
infotainment», the results show that the radio module
was not only a complementary study tool, but also
entertaining and attractive. This is observed in the
data, which tell us that 40.6% listened twice, 12.5%
three times, and 43.7% only once. Bearing in mind the
fact that ease of use of the method was one of the
most commonly mentioned characteristics in the open questions, the fact that more than half of the sample listened to the radio show more than once suggests the idea of entertainment.

Means of listening also had an effect on the amount of time invested in listening to the radio module. The data with regard to this is coherent with those mentioned in the above paragraph. 42.9% of students investing less than an hour (that is, they did not listen to the whole show more than once, it being 38 minutes in length), and the same percentage investing between one and two hours listening to the talkshow. Furthermore, comprehension of the content provided similar results in terms of time: 48.2% declared that they had understood the content of the radio program on first listening, while 42.8% needed to hear it more than once, even if the second time was only partial and/or intermittent.

The fact that we did not check whether the students in our sample had listened to the module without having read the written material on strategic planning in Public Relations leads us to think that these data must be considered on the basis of the radio module being a complementary tool. At least in terms of this research, the radio format was not intended to substitute written material. In fact, it complemented it. As one student pointed out in an answer to the open question of whether the subject was more entertaining with this type of resource: «I think it is good complementary material, but I find it more useful as an introduction before reading the written material than as a substitute for it».

Or, as another responded: «I find it useful as a first approach to the subject matter». In short, also from one of the interviews: «It’s more entertaining, but only complementary».

It is for this reason that the interviewees were also asked a series of questions relating to this idea of it serving as complementary material for comprehension of the content of the written model. Thus, 83.1% responded affirmatively to the question of whether the radio module had helped them to better understand the content of the written module.

These results are of more interest when compared with those obtained for the questions that followed them. Students were asked successively whether the module had helped to prepare them for the continuous assessment test (CAT) associated with it, and whether they thought that enough knowledge of the subject matter was transmitted compared to the content of the written module.

The subject «Public Relations Theory and Techni-
The percentage was even higher for students who considered it a good idea to extend the initiative from journalism to other subjects and areas of study. However, compatibility is not always desirable, as evidenced by the fact that 70.3% felt the initiative was compatible. The personal circumstances of each interviewee influence the result which, despite not having as high a majority as the others, does reinforce the idea of this methodology being a flexible one.

Finally, of the five open questions, four referred to the applicability of the method to other subjects on the Advertising and Public Relations degree course, and one referred to whether the subject was more entertaining with this type of methodology. The responses to this last question are of most interest to this research, although it is worth pointing out that in our analysis of the content of the other four open questions, not only do we find opinions to be in favour of extending the radio show format to other content, but also the desire for this to actually happen. The only doubt in the mind of the students is how to produce the theoretical content without using formats typical of educational radio programs.

If we now return, however, to the data for the question on whether the subject is more entertaining, only 10.7% of students — that is, seven — did not think it was. Nevertheless, of these seven, six stated that this was due merely to a subjective issue: preferring to read a text to other narrative alternatives. These results suggest that the method of journalism-based learning constitutes a good example of «edutainment», the fusion of entertainment and education.

4. Conclusions and limitations
The journalism-based learning project implemented by the UOC aims to apply journalists’ working methods to teaching content in order to make it more attractive to its audience (the students). For the project to be validated, it will require further pilot programs, but in this first research it provides us with a goal for improving learning methods, as students who have used the radio programs on this project responded affirmatively in relation to their understanding and knowledge of the content, the usefulness of the method, interest, satisfaction and compatibility between study and other activities.

Furthermore, it has been demonstrated that the radio is an ideal medium for this model. As a practical resource, it may constitute a new microgenre of radio program. Martí (1996) distinguishes between radio macrogenre, genre and microgenre. According to this author, these three categories can be used to precisely determine the nature of a radio program.

These variables are capable of reflecting, in addition to content, aspects such as the formal structure of a segment and the program’s target audience. Within the entertainment macrogenre, Martí (1996) establishes the genre of talkshow, which incorporates microgenres such as leisure, culture or youth issues. The

Changes introduced by the Internet and what is known as Web 2.0 have not helped media managers to relocate their new role in society. Initiatives like journalism-based learning show that, far from provoking doubt and inaction, the media can position themselves at the center of social changes above and beyond changes relating strictly to how information is provided. From this perspective, Brown’s role for «infotainment» evolves towards that of «edutainment» with the incorporation of methodologies that help to transmit knowledge by dramatizing educational content with language, register and journalistic genres.

Educational microgenre of the talkshow genre was the tool used in our journalism-based learning experience, which makes it extendable to any level of training, above and beyond university studies.

In addition to this, the results obtained not only reinforce the paradigm of entertainment and journalism’s fundamental attractiveness for learning, but also lead us to understand two further principles on which this new methodology of educomunication is based. Firstly, we are referring to the new role of the media. Changes introduced by the Internet and what is known as Web 2.0 have not helped media managers to relocate their new role in society. Initiatives like journalism-based learning show that, far from provoking doubt and inaction, the media can position them-
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tainment» (Fossard, 2008) with the incorporation of methodologies that help to transmit knowledge by dramatizing educational content with language, register and journalistic genres.

The second principle we are referring to is that of synergy between the media and agents in the field of education. Journalism-based learning demonstrates the need for coordination and co-operation between schools and universities and the media that provide each community with information services. For this reason, the method of journalism-based learning shows how the media in a given community (whether a small village or a large city) have strategic roles to ful-
fil.

In summary, this experience represents an advance and an improvement in services and the optimization of communication technologies, two factors which, as noted by Cebreiro and Fernández (2003), are necessary if universities are to contribute effecti-
vely to lifelong learning.

Finally, it is worth highlighting the fact that these results cannot be understood without taking one funda-
mental element into consideration: the experiment was not conducted with students who had no know-
ledge of the written content of the module. This is one limitation of our study, but it also constitutes the con-
tent of a future study which we will carry out with our students at universities where we teach face-to-face, as opposed to distance courses.

Notes

1 The model was applied to other subjects on the Advertising and Public Relations degree course, but research was restricted to the subject cited here.

2 Four-year degree course or licenciatura in Spanish (currently being converted to the new name Grado, which corresponds to a university degree) of which the subject forms a part.

3 Which consists in applying the principles of this planning to a fictitious case.

4 Specifically, the questionnaire was sent on 11 March and a response deadline was given of March 28.

5 The name of the module is Project management in Public Relations. It contains approximately 20,600 words and constitutes a third of the content of the subject.

6 During the talkshow, the presenter handed over to a well-known journalist in a fictitious Public Relations firm, who interviewed a fictitious strategic planner, a role filled by a journalist. The latter explained some of the basic requirements of project planning in Public Relations from the point of view of a professional. This section and this character were the only fictitious parts of the talkshow.

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References

(http://www.usda.gov/hs/documents/FEB02_issue/article01.html) (04-
09-09).

CEBREIRO, B. & FERNÁNDEZ, C. (2003). Las tecnologías de la comuni-
nicación en el espacio europeo para la educación superior. Comu-
nicar, 21: 57-61.

CEBRIÁN HERREROS, M. (2002). La radio en la convergencia multi-
media. Barcelona: Gedisa.


HOYT, M. (1995). Are You Now, or will You Ever Be, a Civic Journalist? Columbia Journal Review (www.cjr.org/year/95/5-
civic.asp) (03-06-09).

LOPEZ NOGUERO, F. (2001). Los medios de comunicación en la edu-


MARTÍ, J.M. (1996). La radio a Cataluña. Barcelona: Centre d’In-
vestigació de la Comunicació.


cursos didácticos, 172, 73-76.

PASTOR, L. (2006). Hacia una gestión integral de los contenidos. Revista de Universidad y Sociedad del Conocimiento, 3 (www-
-ucc.edu.ru/e/3/2/dr/esp/pastor.pdf) (02-10-09).

PERONA, J.J. (2009). Edu-webs radiofónicas: experiencias españo-


PERRY, D.K. (2003). The Roots of Civic Journalism, Darwin, De-

wey, and Mead. Landham, MD: University Press of America.


PUBLIC JOURNALISM NETWORK (2003). A Declaration for Public

Journalism (www.pjnnet.org/charter.html) (29-07-09).


RICIOY, M.C. (2004). La prensa en la educación de adultos. Co-


SANGRA, A. (2008). La integració de les TIC a La universitat: mo-
dels, problemes i reptes. Tarragona: Universitat Rovira i Virgili.

SCHAFFER, J. (2001a). Interactive Journalism. The Pew Center for Civic Journalism (www.pewcenter.org/doingj/speeches/s_pit-
shurghsip.html) (15-07-09).

SCHAFFER, J. (2001b). Lessons in Connecting Readers to the Me-

dia. The Pew Center for Civic Journalism (www.pewcenter.org/
doingsi/speeches/a_asne91101.html) (15-07-09).