

The cyberjournal as a teaching tool: from technique to practice

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Abstract

During this presentation we intend to show the interdisciplinary work that culminated in the creation of the cyberjournal Jornalismo-PortoNet (JPN) in March 2004.

The primary purpose of JPN was to provide an academic training post for last term students, simulating the editorial office of a newspaper.

Taking advantage of the interdisciplinary and human resources of the course, a scheme

has been implemented for editing and publishing news material, involving teachers from particular fields of Design, Computer Science and Journalism.

The idea was to make the most of the potentialities offered by internet, choosing news building structures to suit this new process (open, in tree, multilinear, and with parallel linkages), by means of text blocks hyperconnected to one another.

The goals proposed in this initial phase of JPN which lasted until the first days in June were globally reached. Although JPN was not widely advertised, its visibility was good, reaching some twenty thousand visits in the two and half months of intensive work. In all, more than 900 articles and dozens of radio and television reports were prepared and transmitted.

These results make the authors conclude that the cyberjournal is an excellent tool in Journalism teaching, considering its low production and distribution costs and the internet potentialities as medium of communication wherein all the other media converge.

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1 Introduction

JornalismoPortoNet is a website of journalistic practice created by the Course in Journalism and Sciences of Communication at Universidade do Porto (UP) in March 2004. This project, leader in Portugal in what concerns the use of the most advanced techniques of cyberjournalistic production, was the result of the work involving a group of teachers of the course, from the particular fields of Journalism, Computer Science and Design.

In the initial phase, which lasted until June, *JornalismoPortoNet* (JPN), the name that resulted from the first weblog of the course, was a training post for some of last term students. For two and a half months, more than 900 articles and dozens of radio and television reports were prepared and transmitted, including the several thematic areas chosen (UP, City, Region, Country, Europe, World, Society, Politics, Economics, Culture, Education, Science and Technology, Sports and Media).

Although there was no substantial advertising, JPN reached some twenty thousand visits during that period of time, frequently exceeding three hundred daily visits.

There was no JPN update during the school holidays, but the cyberjournal was (and still is) often visited (more than one hundred daily visits), due to the quality of news and daily first page changing, through automatic rotation of the best journalistic works.

JPN worked as a true journalistic website,

bringing together independent spaces of radio and television journalism and cyberjournalistic texts, without ever denying JPN's condition of academic laboratory.

Despite individual preferences, all members of the team worked in the several journalistic areas, working sometimes as multimedia journalists or *backpack journalists*, as Jane Stevens calls them (Gradim, 2002, 7).

2 Contents Management Platform

At the beginning of 2003, when the development of a cyberjournal was being planned, the technological options were one of the factors that contributed to the project's frame. Starting with the initial ideas and considering the restrictive available resources, some requisites were systematized.

Therefore, the following generic requisites were established:

- To allow several users, with different skills (writing, editing, approval).
- To allow the contents control (approved or not by the publication).
- To allow different types of journalistic texts. For instance: news, opinion articles, multimedia articles, dossiers.
- To allow different types of content: text, image, audio and video.
- To have a low initial learning side, aiming at a quick adoption from the contents producers.
- To have high flexibility, aiming at an easy evolution for alternative configuration.

The medium term acquisition, installation and maintenance costs were other important factors. Particularly an easy maintenance was considered fundamental for the project's long term success.

Alternatives

The contents management system *Bricolage* [1] was the first alternative considered for the cyberjournal's development. This system was already installed and tested by some of the course teachers with promising results. Moreover it fulfilled all the functional requisites established.

This system was originally designed to manage news websites and it has some interesting characteristics. However, after some initial effort, the system's configuration and adaptation phase revealed more difficulties than expected. The commercial proposals received to adjudicate this phase were above the available budget.

When the need to adopt an alternative strategy became obvious, the option was the *MovableType* system [2]. This platform was already used to support the weblogs available for students. Although the functionality was limited, there was a deeper knowledge of this tool. So, it was possible to surpass the initial difficulties, in a short time.

Methodology and Development

During the development of the cyberjournal, a phase implementation strategy was adopted. Desired functionalities were defined and timed and each new task only began after the conclusion and testing of the previous one.

This option allowed major control of the results of each intervention and therefore more accurate evaluation of positive or negative results of each option.

The work was structured into the following phases: basic frame, news archive, search mechanism, news comments, related news list, and audio and video combination.

During implementation several options were made. The following list shows some of those options, which can be considered quite practical to develop a news website:

- To divide, in a clear way, the structure (HTML) from the presentation (CSS) of the web pages. This option allows a better organisation of the work into multi-disciplinary environments. It offers advantages in terms of pages download speed, easy change insertion, among others [3].
- To include keywords in the URL. Most search engines, especially Google [4], give major importance to pages which include in the URL one of the words to search for. For example, instead of addresses with a structure like <http://www.site.com/article?332>, use addresses like http://www.site.com/european_elections.html.
- To create documents with good HTML structure. The HTML structure is very relevant to the indexing of pages by search engines. The semantic structure of HTML documents helps the search engine to "understand" it. For example, Google distinguishes the keyword's value on the heading (H1) from the keyword's value on a paragraph (P), gi-

ving a greater importance to the first one.

- To relate a unique URL to each article. This option allows the creation of a direct access point to each resource (text, audio or video). So, it is possible to do a better labelling of pages regarding the keywords searched. On the other side, the availability of these access points motivates the creation of links semantically richer than the generic links for the website's main home page.
- To use RSS [5] technologies. These technologies, that allow readers to subscribe warnings related to changes in the site's content, are used by an increasing number of people. In JPN's case, the resource to this type of technologies led to an increase in users' loyalty.

Future perspectives

After the first version of the cyberjournal, and based on experience, it is possible to identify areas to develop in further intervention. Therefore, considering the improvement of the contents management platform, we stress some challenges:

- Better support to incorporate audio and video. Specially, setting up of streaming mechanisms.
- Better support to control workflow. Particularly, to allow for several levels of approval, the use of notes added to the articles, the development of concepts like “electronic desk” and “virtual workspace”.

- To improve the visits control. Particularly, to allow the knowledge of popular browse paths, most visited themes, entry and exit points. Also, to allow the development of custom interfaces for the content producers to access this data.

3 Interaction Design Options

The programme for the JNP website interaction design implied taking into account the main goals of the site and the interests and skills of the target public to define the contents and its functions.

This way, the JPN team proposed to develop a website with news, in permanent updating, with general and specific character, with some external links. These goals would help to define and group the main contents and functional requisites, respectively:

- Of general ambit: Europe; World; Society; Politics; Economics; Culture; etc.
- Of specific ambit: Newspapers directory; Books for media; First pages; Printed opinion.
- And some external links – Weblog; Forum; Online vote.

The list of contents and functional requisites indicated us few static contents – only information about Editorial, Team and Contact pages – a great number of dynamic contents – all the regularly updated pages – and a reasonable number of functional contents – all pages with video and sound that needed specific programmes like “QuickTime Player”.

Considering the interests and skills of the target public, two user types were taking into account:

- The user without defined objective, that tries to occupy his visualisation time with information that interests him; he reinforces the need of appealing design and content that, due to the fact he has an undefined task, induced us to have more careful with the home page and to structure clearly the information he may find.
- The user that looks for information fast and effectively, impatient with long page and graphic's download times, which accepts long text menus with multiple options and search mechanisms.

This information related to objectives and user types, having as model sites as BBC, outlined the best strategy to project the interface design to send the user clear messages about its action and the system's answer.

Some heuristics and design principles were taken into account to well visualise the system and its several functions: feedback through different states between button's mouse out and mouse over; graph through variation of superior navigation bar colour; internal consistency with resource to a consistent browsing structure between pages; navigation bars that allow to understand how to use them.

The JPN interface design was developed during the Course in Journalism and Sciences of Communication, included in a strategy of global visual communication. Therefore, the option for developing an interface that could be a consistent entity was made. In terms of communication, this translates into demanding a high level of union with the other graphic messages of the institution.

Thus, graphical elements already applied to other supports were used, as for example colour, some symbols and reference to quadrangular form.

The structure presents two main levels: the first one organises the simple signs, symbols and chromatic range, which form an indivisible and significant whole, in order to operate in different perception and memory records; the second one, the level of complementary elements, where we can underline the graphic concept, layout, typography, image, navigation menus, interactivity forms (consistent supports for screen messages visualisation).

The complementary colour – orange – was associated with the main colour – lilac, the institutional colour. Colours were also used in a secondary level. These colours played a space signal role. They also possess a practical function, by identifying, with distinctive colours, the several website sections.

It is important to say that the colour component was not reduced to its application into the most underlined graphical elements, but to a whole group of situations where its presence is determinant to the process of visual message identification and decode.

The image component of the website started from the principle that our culture and information systems still depend on photos to confirm reality. Photo rebuilds the world in its own way, in the limit that doesn't enable people to see the objects around it.

Each photo is a multiple intention of thousands of stories. The images in JPN are broadcast in the media in a society that flows into the mass media, which predict a process conscience gain; a process as a communication mechanism, dynamic and in constant change, always considering the close re-

lation between the spectator and the image he rests his eyes on.

Therefore, the use of image in the website intended to motivate among students (future communication professionals) a socially responsible use of image and to point out online images as non-television reference creators.

A critical attitude towards these digital images was carried out; digital images that rent the screen for a short period of time and which perception is different from all the others, specially because of its ephemeral characteristics, constantly changing thanks to the speed which images can be produced and showed in the web. To produce images to the website involves taking into account that image is one more message and sensorial stimulation that the spectator gets online; to understand that the messages given by the image must be easily decoded without disregard its aesthetic and emotional side.

Because of its icon nature, it is the first one to get the spectator-reader's attention. The image is the face of news, but is also itself a document to read.

JPN's interface was based in a structure that not only had as goal the drawing, graphics, or colour combination. It also wanted to have a visual structure that could support the diversity of messages sent out. So, it wasn't only the construction of a modular design structure, but also the application of a visually global concept.

4 Editing, Human Resources and Material Organisation

The organisational criteria had as main characteristic simplicity. Journalism and Sciences of Communication ended in 2003/2004

its first course, and was in a setting up and evaluation phase. Consequently, it would be more meaningful to talk about lack of resources than about its organisation.

However, "necessity is the mother of invention" and with the good will of teachers, technicians and specially students it was possible to create a work scheme that was beyond all expectations. When the course had no response capacity regarding material recourses, the editing team was looking for improvised solutions that somehow showed the group's commitment.

Therefore, in the morning, one of the teachers along with the editing team would organise the agenda. The articles for that day and for the rest of the week were set, as well as dead-lines. The students' team nominated an editor each month, as well as a secretary. Gradually, the students began to develop an editorial office routine and to adapt to the desired working rhythm. Quickly it was visible the editor's effort and capacity to solve problems, like finding fonts contacts, regarding dead-lines, covering services that were not in the agenda, etc...

One of the group's challenges was exactly to cover themes to the online newspaper, radio and video that sometimes didn't happen in an organised way, which made the students' life harder.

It is also important to underline that, despite the fact this was a morning work, it sometimes extended into the afternoon for some students and particularly for the editor, who gave special importance to the support of colleges who were still finishing their articles. This structure was supported by teachers. Beyond the agenda, teachers tried to follow the students' works and difficulties, in person or by the internet. The articles were

always revised before publishing. Beyond the online news correction, teachers of radio and TV areas had also a critical following of this news.

The editorial also had the help of two audio-visual technicians who captured, edit and produced the image, and another element who assured the website's computer management, publishing, digital image editing, etc... This last one worked exclusively to the website, but the other two didn't. The technicians supported the whole course, what brought several limitations to video articles.

Last, we only need to talk about the material resources organisation, an easy task because they were few. To the gate's work, a room with about twenty computers, a telephone, 4 televisions (that never were cabled due to bureaucratic issues) and the main daily newspapers was offered. Beyond this space, students could use the radio studio, recorders, as well as 3 digital video cameras (with the technicians support) and several editing systems (*idem*).

When the students were out to work, they would usually move on public transports, on foot or on their own cars. Sometimes the course would pay for a taxi, but it didn't happen a lot.

As a conclusion, it is important to renew that with this organisation, low in material resources, was possible to create a structure that assured the website for 3 months, with students' work from Tuesday to Friday, establishing editorial office routines, with public response, therefore, achieving the proposed goals.

5 Editorial Structures and Techniques

Being *JornalismoPortoNet* a cyberjournal with academic environment origin, our major concern was to put into practise editorial techniques according to this environment, following to most recent studies about the matter. Therefore, we benefited from the fact that the students had a solid training in cyberjournalism, an area where Universidade do Porto came out in Portugal, for the status it gave it and comparing it to the traditional journalism areas (Press, Radio, and Television). Since the first year of the course, students have contact with online journalism and cyberjournalism, improving skills in the second and third years, what allows them to dominate both cyberjournalistic tools and techniques in the last year.

About half of the students that were part of the first editorial office of JPN, had already worked with journal-blogs during the course (Zamith, 2003), what made it easier for them to work at the cyberjournal because the resource management system was the same.

Short texts, leads with 25 words maximum, frequent subtitles, internal and external hyper textual linkages, and regular use of images (specially photos) were the main rules, respected by students, which gave consistency to the cyberjournal and allowed the reader to get used to the texts and browsing.

As strange as it may seem, the hypertext, “one of the most powerful tools of internet publishing” (Outing, 2004), is barely used in the poor Portuguese cyberjournalism. It is used in commercial sites and weblogs, but not in cyberjournals, not even those created exclusively to the internet. Introducing the hypertext as writing rule, JPN made the dif-

ference and originated among visitors the habit of multilinear reading, the one that makes more sense in this kind of medium.

JPN was leader in using an editing technique suitable with the internet, the hyperlinked text blocks, the one Canavilhas (2001, 2) refers, but without the “radicalism” of pure and simple abolishing of the inverted pyramid. The blocks technique, already used for decades in newspapers (Crato, 1983, 235), was adapted to several small articles, each one with its small inverted pyramid, but all connected to each other, giving the reader the privilege of choosing its own path (the inverted pyramid is now built by the reader through the browsing sequence between articles).

To make it easier to understand the multilinear structure in use, two types of browsing were offered to the visitors: the inclusion of internal links in the middle of texts and the traditional “related news” column.

In practise, the text structures often used to divide bigger journalistic articles (reports, big interviews, features and thematic dossiers) were the multilinear structures of multiple entry and exit and parallel linkages referred by Noci and Aliaga (2003, 127-128) in *Manual de Radacción Ciberperiodística*. There were also used tree structures, whenever the presence of a principal article over secondary ones was justified.

With the small news, the ones about actual matters, a simple structure was used, the one with an inverted pyramid, with hyperlinks to internal archive or external fonts whenever they existed or were justified. This practise had the main goal of exploring the new medium potentialities as infinite space for contents storage and information confirming sites.

Independently of the journalistic style, all articles written couldn't have more than 25 words leads. This limit was included in the platform programming, so any writer or editor's distraction would originate the publishing of a text with cuts. This happened a few times during the first days, but soon all were used to write short entries. This rule was this rigid because several studies (Bastos, 2000, 53; Canavilhas, 2001, 2; Granado, 2000) showed that cyberjournal's readers prefer small texts and sweep visually through pages, not fixing too long in the same one, and the reading in front of a monitor is more wearing and 25% slower.

The 25 word limit was a rule that allowed permanent page stability, to which another joined, the “obligation” to add to each lead a small image of 200x150 pixels. This rule was hard to apply during the first weeks because the course didn't have an image archive. To solve this problem, the trainee who was out for work always took a digital camera, achieving experience as photojournalist.

Not so often, the articles were enriched by info graphic elements, produced by the trainees or by the multimedia technician.

As well as internal training place for last year students, the cyberjournal received some contribution from several collaborators, like for example external trainees and third year students, who published in JPN their cyberjournalistic work and multimedia articles from the Techniques of Online Journalistic Expression class.

6 Radio Space

The JPN's audio space is connected to the cyberjournal creation itself. Since the be-

ginning of the course the radio area felt the need of a platform to allow students to practise the radio production techniques they had learned. As it was impossible to have a frequency (legally and financially), the cyber-journal creation was an easy, economic and technological way that suited the course.

>From the moment the idea of a cyber-journal was born, it was automatically established that the JPN's audio wouldn't be just a multimedia element but also a space for radiojournalism, through an online newspaper. We refuse the idea that the internet would, long term, destroy the radio. We think that it is a powerful tool to the radio diffusion. Eduardo Meditsch defends: "The radio as a medium of transmission – the one with radio frequency – is no longer a reference to define the radio as medium of communication. This one, the one with a radio technician, is now also transmitted through cable, internet, and satellite." The death of the radio has been announced, but it always managed to keep its identity. We believe that today it begins to happen again. The internet allows once more the reinvention of the radio through a new medium of diffusion, just like the transistor gave a new life to the radio in the 40-50 decades, when the television started to be a threat.

Based in the presumption that internet is not a rival, we decided that the radio element in JPN should be expressed in two ways, not to be reduced to a multimedia space: through daily radio news and through daily reports according to reality.

This audio space creation inside JPN was the way of making the radio area autonomous; so that students could develop the theoretical concepts they learned during classes and could try radio production techniques in

real time, as it was impossible to train each student in radio companies.

As we refused to reduce the audio to a multimedia element, it was necessary to create conditions for the students to feel inside the classroom the radio environment, even the medium of diffusion being a cyberjournal. In the news case, to be as close as possible from the radio station routine, we established an hour, 4.00 pm, for the radio news to be available in JPN. We also established that it should be 5 minutes maximum. The news availability was the end of a routine that started at 9.00 am, with a meeting where all the themes to the cyberjournal and to the radio were established. This selection could be confirmed or not during a second meeting, around 12.00. After establishing the alignment we moved to production and recording of the news.

As we already said the second component of the JPN radio were the reports. Autonomous news elements as a way of giving word to deeper articles, that had no place in the radio news and that, if they were absorbed by the rest of the news, would loose all the real characteristics only radio can confer: word, sound, silence, music, rhythm and feeling.

At the end of the first JPN setting phase, concerning the audio space, the result is quite positive, not only for the number of radio articles produced, but also for its quality and for the level of response the students achieved. For example, the "journalist" students in JPN were the first ones to record a statement from the new ambassador from Portugal in Iraqi, Luís Barreiros, when a wave of foreigners' kidnapping started. The students, who were part of the project, learned pretty well the radio production

routine, once some of them had already some training in radio companies.

The existence of an audio space in JPN was also positive, because students could understand the differences of this medium and the way it connects with other types of journalism. The students, without realising, were part of an alternative experience of radio diffusion that can be the future.

At the end of this first phase, and after the creation of technical and human conditions to its development, JPN audio should grow up to be an online radio, with its own programme and transmission time because, as Eduardo Meditsch says, radio is complete only in confrontation with real time: "radio is different from press (and online text, we may add), because of its live condition, that creates a reality effect and consequently the public's empathy". At the same time, the audio space should keep allowing the selected listening of specific radio products, like reports or news, so that it can give the cyber visitor greater choice.

7 Television Space

When the idea of *JornalismoPortoNet* website was born the goal was to include news in the online, radio and television area to have a multimedia product. But the idea of including radio and television sides was not just that. In the television area the report production implies a specific know-how that we want to teach the students who chose this specialisation.

We wanted the website to be a training place for those who were not placed in companies. Therefore, the television area should contribute to offer the students who chose

TV, knowledge of editorial office routine, report work outdoors and article editing.

Despite this good will, at the beginning we had to deal with all kinds of technological and human resources limitations. Some of these limitations were impossible to beat, but at the end the technical sector gave us the guarantee that it was possible to include video articles of about 1 hour and 30 minutes.

Based on this work platform the students from TV specialisation had themes to develop in outdoors reports. The themes were planned; the students made contacts, collected statements and images with help from an image reporter, and made the work's editing. The reports were previously seen by the teacher, the student and the technician, before they were included in the website. A text was attached to the video, so that the user could select the reports he wanted to see.

The approached themes to the television area were diverse, but always limited to the city area due to transport limitations. We chose themes related to what was happening but also eternal themes. It was the year of 2004 European Football Championship, so we chose themes like the volunteers work or the taxi drivers training to welcome tourists. Another major option was the academic life. We gave special attention to *Queima das Fitas*, but we also approached the investigation carried by the university's institutes, like IBMC. We noticed that, when the website had academic news, the number of visits increased.

At last, it is important to refer that the website also showed the television work from second and third year students. During the Easter holidays, we included in the website, reports about the 30 years of April 25th.

The end result was the accomplishment of

our initial goals, as the students acquired the knowledge and the final product was pretty reasonable, and could appear in any television news. The pity was that the access to television reports wasn't sometimes easy, and that the image dimension and quality were not the ones we wished for.

8 Statistical Data

The analysis of data on Web usage is not a simple and objective process. There are mechanisms that interfere with the access registration on a Web server level. An example of that are the cache mechanisms, responsible for the production of numbers inferior to reality. Moreover, there is no explicit data in the Web server that count visits and users; we assume it from isolated accesses.

Despite the difficulties, we tried to monitor the use of *JornalismoPortoNet* based on two mechanisms. Since the beginning of the project a service (Site Meter [6]) was installed; it allows the production of some basic statistics. After the second month running, the production of statistics by the Web server was configured and the tool AWStats [7] was installed, to analyse this data.

The following image represents the verified evolution of pageviews by month.

This data allowed the evaluation of the project's global success. The different values in April are explained by the fact that the AWStats tool was not being used since the beginning of the month. We should point the fact that after June, we stopped the production of new contents and showed articles from the archive. Nevertheless, it was interesting to see that the number of visits stabilised near the 4000 per month.

During the project, we followed the number of visits per page and the terms used in search. The more seen articles were: “*The ID from the new members of European Union*” (“*BI dos novos membros da União Europeia*”), “*The European Union expansion to 25 members*” (“*Alargamento da UE para 25 Estados-membros*”) and “*More than 60 Portuguese qualified for Athens 2004*” (“*Mais de 60 portugueses apurados para Atenas 2004*”).

Concerning the sections, the ones with great number of visits were: “*Universidade do Porto*” (University), “*Cidade*” (City), “*País*” (Country) and “*Desporto*” (Sports). These results confirm the initial expectations and meet the editorial line established in the beginning – to emphasize the subjects related with Porto's university and city.

9 Conclusion and Brief Evaluation

During this first phase, the results and echoes of the cyberjournal, as teaching tool and future journalists training (with the electronic mediums – online, television and radio – or the traditional medium press), satisfied the established goals.

The students, who had intensive practise and performance surrounded by a similar environment to an editorial office of a newspaper, and whose work was developed under technical and deontological rules taught by journalists and teachers from technological areas, expressed on their reports the legitimacy of the training, the challenge it was and the enthusiasm it created. They considered the experience a solid base to prepare them to an external training or future professional

life. The dialogue between external trainees and the journalists-students from JPN, about the published work, was intense.

JPN's interactivity is expressed in 247 comments to the published news, collected during June. The academic students' opinion and reaction rules, because they were the main public of JPN. The general readers request for information about the Course in Journalism and other UP courses, they comment several news and reports of the day, especially dossiers. For example, the transgenic food theme, the 30th anniversary of the April 25th Revolution, the Bologna Declaration for harmonisation of HE qualifications in Europe, the fires during Summer, journalistic issues in general, Sports (particularly the Euro'2004 and the Olympic Games), the interviews of two public figures – the journalist Adelino Gomes and the journalist-politician-university teacher Marcelo Rebelo de Sousa – on April 25th. The articles that had more comments from the target public were the ones about *Queima das Fitas* (students celebration) in May.

The server registered the access from 58 countries, beyond Portugal: Spain, France, Netherlands, Great-Britain, Germany, Switzerland, Italy, Belgium, Denmark, Sweden, Poland, Austria, Island, Ireland, Slovenia, Finland, Vatican, Yugoslavia, Bulgaria, Hungary, Greece, Luxemburg, Slovakia, Russia, Israel, Turkey, Qatar, Brazil, USA, Canada, Mexico, Argentina, Venezuela, El Salvador, Bolivia, Cyprus, Uruguay, Puerto Rico, Peru, Costa Rica, Guatemala, Colombia, Mozambique, Cape Verde, Angola, South Africa, Nigeria, Kenya, Senegal, China, Macau, South Chorea, Japan, Indonesia, India, Vietnam, New Zealand and Australia. We don't know how many assiduous visitors this

means, but we presume that they are mainly Portuguese people.

We would like the cyberjournal to build a space of important training activities within the Course in Journalism and to find a special editorial feature for its news and contents. The development and results of the project will be constantly analysed.

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