The paper explores some significant changes in the field of scholarly publishing, especially concerning the French context. First the important role of multimedia, its growing influence on the user behaviour and on the education field is stressed. We study particularly the added-values of the multimedia publication and shows how new technologies generate innovative ways of writing, creating, producing and reading. We emphasizes on the emergence of a new culture based upon the metaphoric characteristics of the multimedia that modifies our relation with communication and with the world. Second the paper analysis the electronic world of information that provides challenges as well as opportunities for publishers everywhere. It addresses a general outline of the internet impact on the relation between publishers, users and authors. Besides, it describes precisely the existing role and functions of French publishers in the academic and scholar levels and gives some examples of services’ publishers. Despite the offer’s variety of French scholar publishers many problems remain to deal with. Our analysis highlights the recent obstacles faced by them both nationally and internationally. Finally it discusses the needs and possible ways of fruitful research to better meet remote users’ needs especially in the francophone context. It focuses on the advantages of creating new partnerships to meet current and future challenges of scholar publishers.

Keywords: scholar publication; France; multimedia; electronic information, remote user

INTRODUCTION

The electronic world of information provides challenges as well as opportunities for publishers everywhere. First, we have to notice the prominent impact of multimedia that takes two dimensions: From one hand, multimedia characteristics and properties provide general outstanding value-added of electronic publications taking into account the user’s behaviour (1). From the other hand, the association of texts, pictures and sounds in the same publication introduces a new metaphoric effect in the information’s implementation (2), (3). This metaphor has a real effect on the user comprehension process.

THE MULTIMEDIA VALUE-ADDED IMPACT

What is the added-value of the multimedia publications in the sense of access to contents and knowledge? A great number of works have been electronically accessible for many years: Not only useful data for information’s research which content is traditionally inclined to expire swiftly (4) become accessible by everyone, but also direct resources of information as papers, treaties and fundamental books.

Moreover, the multimedia irruption supported by the interactivity’s advantages assigns significant innovations to publications reading. Indeed both the multiplicity of entries used to explore a publication and the hybrid connections existing between the components of this publication modify completely the traditional model of appropriating contents. This permits also to go beyond the sequential constraints of the traditional model of printed publications. This revolutionary design of information’s organization is due to the expertise of Douglas Englebart from the Research Institute of Stanford and to the works of Ted Nelson from the Brown University (1965).

Besides, heuristic facilities provided by the Internet network constitute another important added-value as it makes the navigation between different media easier. It is this new way of browsing in knowledge that constitutes the fundamental innovation. The simple transfer of publications’ contents from printed to electronic
media without taking into account their proper characteristics remains unfortunately a general practice in the publishing’s sphere. As a matter of fact, many of the so-called multimedia publications do not take effectively advantage of the hyperlinks facilities. These publications are just merely with being an electronic reproduction of printed models qualified by Steven Harnad by the pleasant term of "papyrocentrism".

Therefore, we believe that changing medium should be considered by publishers as a new culture of designing and distributing information’s contents rather than a simple transfer between media.

THE MULTIMEDIA METAPHOR IMPACT

Although we take into consideration some well-founded critics that emphasize on the obstacles generated by the information’s circulation through the Internet network (5), we should however bring to light the fact that we are assisting to a complete metamorphosis on how people express their thoughts. As we said previously, the multimedia modifies the design of publications as they generate new ways of writing, creating, producing and reading. These changes are far from being harmless, because they give different possible access to a document and also introduce new possibilities of connection between several documents. This idea allows us precisely to propose the hypothesis of new culture’s emergence based upon the metaphoric characteristics of the multimedia: the internal organization of the multimedia and its relationship with the world as a whole and with communication in particular.

According to the fundamental rules of linguistics, metaphor is based on the principle of analogy that describes a thing and/or explains its functions comparing it either with another thing or with better known similar functions. If we apply this definition to the particular case of publishing then the intended metaphor will represent an intrinsic quality of multimedia. Particularly efficient in the scientific and pedagogic publications’ offer, the pictures (as well as the sounds) play by analogy a metaphoric role of explication of multimedia (by juxtaposition, the pictures lighten and explain). This influences positively the user's comprehension, modifies his cognitive process and gives him the opportunity to appropriate the sense.

Besides, we should highlight the existing analogy between multimedia and communication. If we consider that the principal function of multimedia is to establish relations between various data by the means of several channels, and if it also means exchange of information and mutual influences, then we can consider the multimedia as a communication’s metaphor.

We should notice here that this view point about analogy reminds us the cybernetic principles developed by Norbert Wiener at the beginning of 1950’s. Cybernetics is focused on observing analogies between natural and artificial phenomena.

Taking into account its complexity and its multiplicity the multimedia may finally be seen as a metaphor of the world. Indeed, we can consider that the databases and the workings developed in the scientific, economic and juridical fields and accessible via the Internet as a remarkable and an extensive example of a digital encyclopaedia that in perpetual evolution like living creatures behave.

To conclude this part, we have to emphasize once again, on the changes that occur in the publication’s structure. These changes require reconsidering completely the diffusion process of information and thinking deeply about the publishing’s concept itself taking into consideration the existing new electronic environment. Therefore, we believe that publishers should exploit and master (6) the opportunities of this new technology (ergonomic, interactivity and usability aspects).

THE SCHOLAR SCIENTIFIC AND TECHNICAL PUBLISHNG CONTEXT

The scholar scientific and technical publishing has some general characteristics that are shared by many European countries such as France. These characteristics are beneficial for remote users whose relation with scholar publishers appear closer than it is with traditional means.

The digitalization’s technique and the navigation’s procedures have been particularly encouraging publishers to be much more creative and innovative while designing electronic scholarly publications. Their aim is to make these publications better visible and comprehensive via the Internet. These last techniques are particularly appreciated in the scholarly publishing field (7), and especially by teachers whose role is precisely to simplify the moving up from information to knowledge (8). Thus we believe that publishers can effectively play a further important role while diffusing their electronic productions. They can support teachers to make their pedagogic methods more pleasant and active whichever level they teach.

Besides, the decentralization of information’s distribution makes even shorter the delay of publication and access. This fact concerns many countries such as France: within Internet, the problems of periodicity and delivery (9) of scholarly publications in this country are progressively disappearing. This progress concerns mainly the academic field, while the use of electronic journals makes commonplace. Indeed many universities offer to their students and researchers the opportunity to access to recent electronic publications either nationally or internationally. It is the case of the university of Paris 6 and Paris 7 that develop a virtual library specialized in biology, informatics, mathematics and other scientific branches. The general tendency today for French universities is to obtain from publishers newly titles (in real time) as soon as they are been accessible.
electronically, because the most important obstacle of printed publications is less related to their use than to their availability when users require them.

We notice that the relation between authors, publishers and researchers become closer than it is with traditional means. First we realize that students and researchers in France become familiar with electronic catalogs of international publishers. It is custom with them to browse between several publishers websites to locate recent bibliographic data or download integral texts when these latter are accessible (10). Second the cybook software established to promote the French e-book seems to be an excellent example of cooperation between publishers, authors and librarians. Furthermore it improves the digital diffusion of publications to remote users at the price of a local communication (11).

The General French Context

We notice the cohabitation of two different logics in France: First we observe that the prevalent logic in the scholar level (primary and secondary learning) deals with human network undoubtedly optimized by the electronic network and in particular by the Internet spreading use. This new form of cooperation creates a real solidarity between teachers and among scholar institutions. It owes its existence and development to two main human networks: the Centres Régionaux de Documentation Pédagogique (CRDP) and the Centres Départementaux de Documentation Pédagogique (CDDP). These examples of human networks would primordially attend pupils and students attainments’ improvement. Second, we note the academic level (universities and research teams) which logic is totally different from the former, because of the restricted diffusion of the publications and the modest collaborative actions in this level. We realize that the main goal of research teams for example, is to demonstrate their research quality and improve their image and reputation. Moreover, the validation of teachers-researchers’ careers depends on the number and the quality of their publications. Theses publications are more destined to colleagues than to learners who are considered as a subsidiary public.

A Tight focus on the scholar publishing offer

Big and known publishing groups control nearly all the scholar market’s publishing and propose similar and strong competitive offers. First these competitors are aware about the positive effect of multimedia and other new technologies on the learning methods. Second they realize the necessity to propose multimedia products in order to insure the development of their companies. They feel in fact, directly concerned by the emergency of these tools and particularly of ICT in the scholar field. Thus we find many scholar publishers of books who have been developing electronic products. Besides, the technology’s development has involved other competitors who belong to other sectors, and propose scholar and pedagogic scholar products as scholar publishers do.

We can summarize the principal actors of the new online educative information market in France as follow:

- Big group publishers like Lagardère, including Hachette (12) and Vivendi Universal (13);
- Independent publishers such as Jeriko (14), Editronics (15), Bibliopolis (16) and Rue des Ecoles (17);
- Start up of para scholar sector as Paraschool (18), Ysangar (19), Keepschool (20) and the Cybeprofs (21);
- Industrials like France Telecom, Renault, ELF and Nestlé that offer growingly educational contents for communication and commercial purposes;
- Public institutions that deal with information such as INSEE (22) and other big cultural institutions like the Musée du Louvre (23) and the Bibliothèque Nationale de France (24);
- Teachers and associations of teachers like EPI (25), Clionautes (26) and Café pédagogique (27).

Scholar printed publications are segmented in to clear three types of contents: Scholar production, Para scholar production and Educative publication based on activities of games.

- Scholar production elaborated as regard to the school official programs. This production requires teachers’ mediation and can be used either at home or at school;
- Para scholar production that matches with the school official programs but can be freely used at home by pupils;
- Educative publication based on activities of games and conceived for a wide public according to the criterion of age. These publications do not explicitly refer to any school program.

In the electronic publishing context, the boundaries between these three categories have tendency to disappear because of the target population’s difference of multimedia products: Not only pupils and students use these products but also parents and teachers who are interested by their facilities too. Moreover we should quote the diversity of the use’s place of multimedia products. In fact, we notice that these products are used in classes differently than in scholar libraries (known in France under the appellation Centre de Documentation et
d’Information- CDI). In addition we have to highlight the expansion practice and increasing interest of self-learning often held at home.

Despite the market publishing variety, we realize that the major offer is located on the para scholar field which target population is composed by pupils and students. This offer is presented in off line media (CDROM). However, online services proposed to teachers have been significantly developed too by some publishers. Besides, many enterprises from the informatics’ environment participate to the multimedia scholar production market too. The rapid spread of their actions represents a real serious danger in the scholar field because they are not as qualified as publishers especially concerning contents treatment. Furthermore their acquaintance with pedagogic methods and practices is not sufficient.

Although French electronic publishing is continuously developing, we should admit that it not only plays a weak role in the international publishing environment, but also it takes a tight scholar market part in France. On the other hand, traditional publishers who are still considered as specialists of textual and iconographic treatment undoubtedly understand that their strategy of development and innovation depends upon their capacity to offer digital technologies use. Thus we believe that their expertise and qualification are irreplaceable. Their capability of accommodation permits them to adjust easier their offer to the new needs and uses.

A Brief Analysis of the Academic and Research Context

In a previous qualitative study carried out in 1997 to identify the teachers-researchers’ use of electronic information (28) in France, we found out that the practices of information research by teachers-researchers varied regarding:

- their age: It appeared that the youngest teachers-researchers used more than others the potential of informatics’ resources. Resistances came from a reticence in changing uses and sometimes from an aversion of the computer. This aversion was mainly related to a fear of not knowing how to use computers. With the renewal of the generations and the strong development of practises, this situation has progressively disappearing.
- their specialization: Teachers-researchers in exact sciences had globally more intensive practice of electronic information than those in human sciences who rather used classical resources.
- their viewpoints concerning information viability and validity: Many Teachers-researchers considered that only the known resources of long date (periodicals, books, data bases) had a sufficient reliability.
- Their attitudes toward resources’ complementarities: the responding teachers-researchers declared using simultaneously paper, online information and CD-ROM, with regard to the access to the bibliographical references. They take into consideration the respective qualities of these three types of resources.

Nowadays, we notice that the situation has significantly changed, as teachers-researchers use simultaneously electronic and printed resources. Indeed, the recent studies carried by many French research teams (29) reveal that academic users consider more than ever electronic information as a material of first importance. They cite some examples of known publishers websites such as Elsevier and show their uses as well as their daily difficulties. These observations confirm our viewpoint.

Generally, we can quote three main sorts of online publications that represent three types of parallel and competitive network:

- French scientific papers published within commercial websites. We can quote essentially those made by Bordas, Dunod and Gauthier-Villars. We have to notice here the impact of English hegemony’s problem on the publishers of these papers. In order to be recognized by their peers and known in their scientific domain, French researchers as their foreign colleagues are doing, choose to diffuse their works in English. That’s why French publishers decide to publish in Shakespeare’s language to remain competitive and face big international publishing groups such as Elsevier (in Netherlands) and Springer Verlag (in Deutschland).
- Online papers published by Research teams and laboratories. If these publications worry seriously publishers it is because of their adequate response to the researchers needs: Online papers are approved by scientific committees and are freely and speedy accessible on the Web.
- Individual publications located in personal websites made by researchers themselves. Although the value of these productions is not ensured, the fame of the authors is often considered as a criterion of quality in itself.

This structure reveals a deep and a strong crisis in the French publishing that threatens the existence of the francophone scientific culture. According to recent statistics (30), the attendance of publishers from France and other francophone countries in the websites is about 10%. Meanwhile, we estimate that the number of francophone customers will double in the coming ten years (31). We hope that electronic publications will be accessible because of various legal agreements made with publishers and governments. Note that until now, the
access to important French-speaking publications is still ill-balanced. Moreover this access remains extremely expensive for many francophone African countries.

THE RECENT CHALLENGES OF FRENCH PUBLISHERS

The variety of this electronic environment’s actors and offer entails on an intellectual and a financial challenges. From this viewpoint, publishers should have a new state of mind to acquire and/ or reinforce the sense of risk and innovation (32). Nevertheless, we realize that many publishers in France meet some difficulties to apply these principles due mainly to three types of competitions. The first competition is internal and occurs between French publishers groups themselves, such as the recent “fight” held between Lagardère and Vivendi Universal. In addition, the multiplicities of online resources risks to threaten the activity of print scholarly books which are prospered in primary and secondary educational levels but still weaken in the high level. The problematic questions all French publishers in this field (such as Nathan, Foucher, Bordas, Dunod and Gauthier-Villars) seek for responses, deal with financial aspects: How can they continue to be efficient? Is the electronic bag developed in France by Bordas and Nathan for scholar users an effective solution for the future?

Secondly, French publishers try to face out international publishers groups competition. The third current difficulty for French publishers is to deal with the challenge of informatics’ societies, software producers and even teachers that propose similar and attractive publications. It is true that these competitors are not as qualified as publishers who are traditionally responsible for the diffusion of information’s contents and are qualified for that. Their intention is not always clean because of commercial reasons too. However, they succeed in bypassing the usual channel of publishing.

For all these challenges, we believe that publishers must be much-encouraged and much-protected to face these competitions. The state’s role is crucial in this case to support French publishers. These latter admit that they receive very late the new programs for primary and secondary levels. That’s why they find many difficulties to copy with educational and pedagogic changes. So they expect from the Minister of Education to give them the opportunity to consult these programs as soon as they are published and guide them officially by a set of criteria and indications so as to propose appropriate and useful scholar products.

WHAT ABOUT THE POSSIBLE PUBLISHERS OPPORTUNITIES?

Despite all the quoted severe challenges, we have to be conscious that publishers still have a crucial part to play in supporting relevant access to information. As the research and the reading circuits are no longer linear because of media’ multiplicities and complementarities, users require much more mediation as well as personalized contents.

The increasing autonomy of users and their feeling of freedom do not necessary mean that they are able to obtain by themselves the useful information for their knowledge. Yet users need to be well-oriented in the electronic labyrinth especially the youngest. Therefore, we believe that publishers like librarians can contribute to support learners in selecting the required information. Adequate tools can help these users to navigate simply and speedy from the list of themes to the integral text of an article, or to the bibliographical references, or else to the appendix.

For researchers, the hypertext links’ relevancy and the pictures’ availability simplify the online training. In this context, very few publishers have conducted current studies to find out how users evaluate the usefulness and usability of electronic scholarly publications. Their ultimate aim is to copy with users’ profiles and needs’ diversity. So they become aware of the shortage of electronic publications structuring, the high cost of restricted access to integral texts and the problem of updating the websites of publishers’ locations (Uniform Resources Location Addresses). Furthermore, they understand that despite the gradual accommodation to the electronic scholarly publications, some users reveal the limit of their appropriation to the contents of publications as they often access to marginal information (mainly the table of contents) that often exist in the website for advertising reasons. Consequently, some users consider that the non-availability of integral text carries off any valuable interest to many electronic publications use. Others believe that the existence of too information kills the information interest. They admit that the commercial practice of some electronic scholar publishers pose ethical problems.

According to the results of a survey in 2002 held by a French association for online services (33), 29% of French people are ready to buy cultural products via the internet. It seems that this number increase prompts some French publishers to pay further attention to users’ attitudes. Indeed Bordas and Nathan had tested their electronic handbooks for two years (2000-2002) in four secondary schools (in Boulogne, Vivonne, Moreuil and Strasbourg). The assessment dealt with both technical and educational aspects. It permits these publishers to enhance the interactivity of their school products. From one hand, teachers can personalize the contents of the handbooks by adding links and attaching documents or annotations. From the other hand, pupils who seem to be motivated by the use of electronic handbooks can make notes while reading the handbook content.
Despite their numbers increase, French customers lag behind in Europe. Hence further French scholar publishers should conduct inquiries about users’ needs. As each inquiry brings a different understanding and knowledge, the results will strengthen the possibilities of meeting publishers’ goals as well as users’ needs.

Besides, we should take benefit from the partnership opportunities for publishers. We notice that the difference between publishers, librarians and booksellers are growing blurred. Their roles intersect and sometimes merge. This implies from our viewpoint to define new forms of alliance and think about specific functions in order to be effectively complementary and avoid errors or duplications. The basic advantage of this cooperation is to permit different actors to deal more efficiently with the copyright protection problem of electronic scholarly publications. Moreover, expertise and competences’ exchanges lead to master performing tools of information production and access. This comes obviously through the diversification of actors’ responsibilities that intervene in the various stages of the communication cycle of electronic scholarly publications.

Concerning the francophone cultural preservation, we believe that known publishers from north countries such as Hachette and Vivendi should show further implications toward their colleagues from south countries who need to be supported both technically and financially.

Publishers must reconsider their savoir faire but remain true to their mission and principles. We believe that the main future challenge in the profession is to think likely about different changes (technological, social, political, economic and cultural changes), so as to find the right positioning. For example, one of the current general issues that is still debating in the profession concerns the multimedia effect on the act of writing: how can publishers make the practice of hybrid reading less difficult to scholarly publications users?

CONCLUSIONS

The widening gap between expectations for using new technology to permit publishers to play a more active part in the profession, especially in the scholar’s field, and the resources available for achieving these expectations offers new challenges and opportunities. The paper had examined the effective situation of publishing in France.

One of the quoted ideas analysed in the paper is that the scholar publishing in the electronic environment requires an explicit commitment between French publishers and the minister of education. This situation differs from the printed publishing as the proposed scholar books follow the official educational programs for both primary and secondary levels. Then we believe that following an official commitment in the case of the electronic publishing will connect publishers with teachers who are willing to take advantage of new technology’s opportunities. Not only this connection will lead to exchange expertise and learners’ requirements, but also find out new appropriate ways for pedagogic electronic tools. The paper gives some suggestions to face external competitors.

First, French publications’ offer should be reviewed to copy with the market demand. Despite the abundance of the electronic scholar publications, we warn that the existing offer is immature. We do not know enough about pupils and students’ practice, more corpora are needed to study this important aspect. According to the existent programmes carried out especially in France, little effort is made to understand users’ attitude and interpret it in such a way that it will be possible to judge whether the objectives have been more or less nearly achieved.

To our mind, the problematic reality remains related to the lack of acknowledgment of the remote user. It is high time that francophone publishers took into consideration the difference between cultural and social identities and analyzed the pedagogic needs of the francophone users in order to propose to them personalized publications. The intended idea is to provide an electronic publishing adapted to the diversity of needs. This solution is technically feasible contrarily to the printed one, which publishing contents are stereotyped and have the same model.

Hence, an emphasis on the attitude of users while navigating through the scholar publishers’ websites constitutes an excellent mean to decrease the bad effect of competition and find the right position in the international electronic market. Therefore, reinforcing the appropriate feedback between scholar publishers and remote users become necessary to improve the publications’ offer in the electronic environment as much for the contents as the shape. For this reason, we believe that publishers have to think and rethink about the relevancy of their offer. From this view point assessment’s practice is a determinant criterion to come near users’ expectation in the scholar field.

Second, applying benchmarking technique here may provide a unique way of looking at the best existent assessment’s expertise that can be then adapted successfully by other scholar publishers to benefit their users, or stimulate critical and collective thinking about interactive common publications contents.

In addition, librarians should help scholar publishers too: From one hand, library managers can play an increasingly important part in transferring their experience and knowledge about users’ satisfaction to publishers who are new in this field. From the other hand, they can encourage their public to benefit from access to distance publishers’ resources by the mean of training sessions for example.
While it can be said that French publishers in the scholar field have doing their best to propose innovative products, it sadly cannot be said that the progress desired by all is being achieved. The really hard work is still less technical than methodological. However we expect that the commitment to harmonize criteria and research about evaluation, testing and feedback between different actors will become in the long-term a major force in the profession in France.

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