From the development of online resources to their local appropriation: a case study

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Keywords: online learning environment, innovation, normalization, appropriation

Sharing resources questions the capacity of different institutions to collaborate in a meaningful way. Different steps in the sharing process are to be taken into account as we contend that teaching resources, despite their intrinsic qualities, can remain unexploited otherwise. The present contribution proposes to study both the development of online resources, the challenges that are posed once the created resources are meant to be used by partner institutions, and the ways they can be integrated into the local contexts, It aims at understanding the process involved in an online learning environment designed for the learning of English, originally created for a specific local audience, and ultimately replicated in several universities. We will distinguish phases to be respected for a successful sharing experience, during the development and appropriation phases, in order to favour the dissemination of innovation in a university context.

for citations:
Rivens Mompean A., Guichon N. (2013), *From the development of online resources to their local appropriation: a case study,* Journal of e-Learning and Knowledge Society, v.9, n.1, 37-46. ISSN: 1826-6223, e-ISSN:1971-8829

1 Introduction

The present contribution proposes to study the development of online resources, the challenges that arise once the created resources are used by partner institutions, and the ways in which they can be integrated into the local contexts, which is a required condition for the resource to be regarded as fully shared. In order to distinguish phases and determine the necessary steps to be respected for successful sharing, we will rely on the analysis of the development phase, the sharing phase (Guichon & Rivens Mompean, 2006) and the analysis of use in context (Rivens & Guichon, 2009).

Taking the example of an online learning environment (*Virtual Cabinet*) originally designed for the learning of English (Guichon, 2006), this contribution explores the way in which a local innovation developed in a contextualized research-and-development framework can turn into a learning environment adapted to the needs of other universities (*Cooplang*). *Cooplang* can be considered an online learning environment rather than an online resource that would be available online with no tutoring involved, as it needs to be integrated into the local learning environment to be fully operational. Thus, in the study of its appropriation and development phases, we take into account the local setting in which tutoring will be organised and the actual usage developed.

This analysis will thus contribute to describe regular phases of dissemination that can be reproduced in similar future situations, in order to develop more efficient processes around sharing.

2 Design process

As Rabardel (1995) has pointed out, it is crucial to consider any given artefacts as "instruments" that are conceived both "as psychological and social realities", which therefore require to account both for the process of development and that of appropriation. The process of appropriation can be examined through the Rabardelian concept of "instrumental genesis", which encompasses both the evolution of artefacts as the user's activity unfolds, and the building of utilization schemes, both of which participate in the emergence and development of an instrument (Rabardel, 1995, p. 93)[1].

Sharing the development of resources questions the capacity of different

[1] Original quote from Rabardel (1995, p. 93): "Une totalité comprenant à la fois une artefact (ou une fraction d'artefact) et un ou des schèmes d'utilisation. (...) Un artefact n'est pas un instrument achevé, l'outil n'existe que dans le cycle opératoire (...). Il manque encore à l'artefact de s'inscrire dans des usages, des utilisations, c'est-à-dire des activités où il constitue un moyen mis en œuvre pour atteindre les buts que se fixe l'utilisateur».

institutions to collaborate in a meaningful way. Different steps in the process are to be taken into account as we contend that teaching resources, despite their intrinsic qualities, can remain unexploited if their potential is not (1) enhanced by a teaching scenario - thus requiring the inclusion of resources within a proper learning environment, and (2) validated by individual users and institutions.

Beyond the mere adoption of a certain number of norms that render the transfer of an innovation to other contexts, it is important to underline the role played by the temporal dimension in the process of design. Cros (2001) has shown that a project follows a certain number of phases that will allow it to become normalised (cf. Chambers & Bax, 2006).

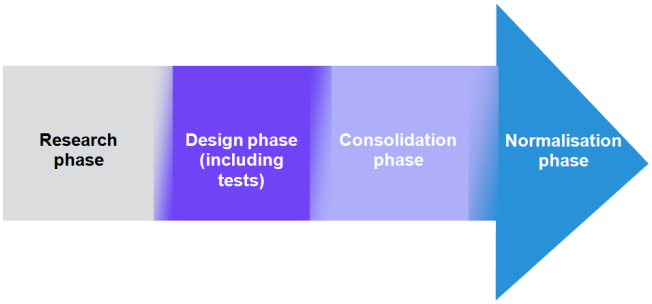

Fig. 1 - the different phases of a design project

According to Guichon (2006: 42), the first two phases correspond to the initial moment when those who initiate the project (researchers, teachers, developers) work on the specifications and design the first prototype. The latter is tested with a sample of users and the results of the tests lead to further redesigning. Most of the pedagogical choices are made at this stage. Then, the second or third prototype is tested on a larger sample of users (including teachers and learners), which triggers some new changes (especially concerning the ergonomics and usability of the technical system). User tests also allow designers to refine the ways in which teachers will use the resources.

In the consolidation phase, the learning environment is used on a large scale and feedback is collected from users. Interfaces can be improved at this stage, the autonomy of the users being one of the main aims of this phase. It seems crucial to empower the users and make sure the system can work without the assistance of technicians. Besides, the system has to reach a certain level of technical robustness.

During phase four, the interfaces have been stabilized and the project has

reached a level of maturity where changes are only marginal. The skills needed to operate the system are transferred to other people so that the initiators of the project are no longer indispensable to the use of the system. At this moment, the transfer to other contexts can be envisaged.

Although it is convenient to present the design phases in such fashion, the reality is more complex since any design project knows episodes of improvisation, tension, setbacks and numerous iterations.

3 Presentation of the project: from Virtual Cabinet to Cooplang

Virtual Cabinet is a multimedia system that is aimed at developing listening and writing skills through several tasks during which learners are asked to process audio and video information coming from different documents. *Virtual Cabinet* is based on the following task-based approach scenario: students have to play the role of political advisors at the British Parliament. They are expected to write memos to help government ministers to make a decision on a current issue. To do so, they have to work on three documents dealing with the same subject (a BBC report, a conversation in a pub and an interview). They can practice their comprehension through various activities, but their main task is to write a memo they will eventually send to their teacher. To carry out this task, students need to develop knowledge about the British political system, choose the proper vocabulary to tackle the issue as well as the appropriate register to advise the minister.

Originally, *Virtual Cabinet* was a research project led by Nicolas Guichon from 2001 to 2005. The outcome of the project was aimed at the language learners of Lyon 2 University's Language Centre. Both categories of users (language teachers and learners) were closely associated to the development, the first version of which was completed in 2003 and constantly reengineered in the following years.

A few important details about the project need to be pointed out:

- the scenario was specially designed to prepare students for the CLES 2 exam, which was implemented in France in 2004 according to the directions proposed by the European framework. It thus meets institutional demands;
- every year, three units are added to the project, which enables students to follow the news in Britain. This constant updating represents a real cost since authors are paid approximately 800 Euros to produce a new unit. It has a cost, even after the initial creation phase;
- the scenario is based on authentic documents taken from the BBC. The BBC allowed the video clips to be used as long as the service provided

to the students remained free and if it was protected by limited access. This implies that the system cannot be open to the whole learning community.

Since the project was successfully implemented at Lyon 2's Language Centre, the Language Centre's Spanish team volunteered to develop a Spanish version that students started to use in 2004. The original system was thus redesigned to take into account the Spanish team's wishes (see below). The German team followed the same pattern and a new version was thus added to the system, again taking into account German specificities.

The redesign that had been triggered by the Spanish and German versions made it possible to envisage French and Italian versions, but the teams in both these languages at Lyon 2 were not numerous enough to take charge of this. In 2006, contacts were then made with two other universities, Lille 3 and Grenoble 3, which decided to become part of a consortium with Lyon 2 and an agreement between the three partner universities stipulated that all resources would be shared and open to students at the 3 institutions. The size of the different teams of developers varied in each institution, but there were team leaders for each version developed within the consortium, and they were involved in the discussions pertaining to issues of re-design and adaptation.

TABLE 1
Phases of the project and actors involved

Language	Institutions in charge	Beginning	Number of phases
English	Lyon 2	Sept. 2002	4
Spanish	Lyon 2	Sept. 2004	3
German	Lyon 2	Sept. 2004	2
French	Lille 3	March 2006	1
Italian	Grenoble 3	March 2006	1

The project was successfully completed and in 2009, all versions were gathered under the same portal: *Cooplang* (see Figure 2).

Fig. 2 - the Cooplang portal

4 The process of appropriation: resemiotisation, adaptation and contribution

The adaptation of *Virtual Cabinet* to Spanish revealed the fact that appropriation goes along with a necessary rewriting of the scenario by the team of developers. We refer to the notion of resemiotisation to describe this process, which consists in reinterpreting the setting of the original version. Thus, the scenario has been transferred from the British cabinet to an online journal "Cibergaceta" and the task now involves writing a contribution for the online journal rather than a memo aimed at a Minister in order to help him make decisions.

This resemiotisation is not just a simple adaptation of scenario and tasks. It also affects the presentation of the interface. From the dominantly red pages of the English version (combined with grey and white), the Spanish version has evolved into a multicoloured one (see Figure 2 for the different versions). The English version is sober in order to symbolise the political setting, whereas the Spanish graphic version refers to the cultural background of Picasso, Cervantes and Gaudi and relies on a more dynamic and graphic presentation.

This first experience of adaptation does not consist in a simple translation but involves much more on the developers' part, who have found it necessary

to find new visual ways to express new goals in order to transmit the values associated with the language and culture.

Lille 3 developers have in turn felt the need to make the scenario evolve, due to different users. The scenario chosen for Agora FLE is an online magazine for journalists coming from abroad to discover different aspects of French society. The learners are now foreign students who are learning French as a Foreign Language, while living and studying in France. In the English environment the learners need to forget that they are students and have to play the role of the advisor (with a specific style of writing). In the Spanish environment, the learners play the role of journalists, yet they are supposed to be Spanish journalists with a unified target culture and target language. In the French environment, the learners play the role of journalists, yet they keep their cultural identity and express themselves as Chinese or German reporters as the scenario suggests that they are trainee journalists who are in France to get trained before becoming foreign correspondents. These journalists have to write an article to present an aspect of French society and to express their points of view.

Finally, this adaptation is also reflected in a new graphic interface that permits the visual representation of the metaphor: a mosaic of journalists from all countries, which places the students in the situation of communicators, sharing their productions with their potential partners.

As a consequence, there have been several elements in the scenario adapted by the Lille 3 team, in the target writing and in the tools that accompany the task. New elements have been introduced to guide the writing process. The developers had considered the inclusion of both a linguistic toolbox (use of connectors, introductory verbs…) and a methodological toolbox (advice and commented examples). Yet, in the end, it was decided to provide advice and examples through human mediation during the face-to-face session because it was felt that the potential of the learning environment was further enhanced that way and paved the way for the ensuing autonomous learning.

5 Towards a model for the mutualisation process

In summary, four aspects related to creating, sharing and disseminating resources can now be underlined:

- the necessity to respect, at the design stage, certain norms in order to permit the transfer of a given online learning environment to other contexts and the need to follow a certain number of phases that allow for its normalization (see Figure 1);
- the "resemiotisation" process undergone by the original scenario when adapted to different languages (Spanish, German, French and Italian in

the case of the *Cooplang* project) by the new partners;
- the dissemination process and the subsequent network created around the shared resources, pertaining to its symbolic appropriation;
- the local teaching practices that are implemented, a final indication of the process of appropriation.

We can represent these different types of collaboration involved in such a project by referring to Cardon (2006) and what he calls the reformers and the contributors (see Figure 3). From the core members who were involved in the original project, the initiators, we move on to the circle of reformers, and to an outer circle of marginal contributors. The different dots refer to the different contributors, representing actual ones (such as English, Italian, Spanish, German and French teams) and potential ones, as the development could take place in several other languages (such as Portuguese, Polish or Arabic for example).

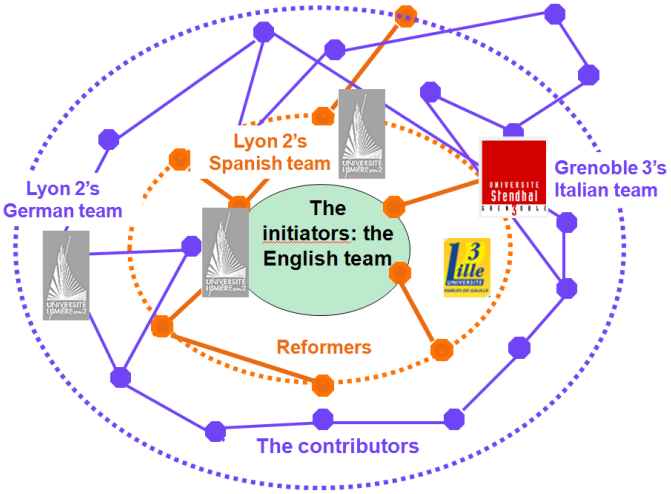

Fig. 3 - different categories of collaborators (adapted from Cardon, 2006)

The Lille 3 FLE team belongs to the reformers, as this collaboration has obliged the core members to accept a new technical and semiotic development. It has required negotiations in order to find a common ground that respected the original scenario and task but that could also be adopted by the new team who had a different context of use in mind.

The adaptation to Italian has not gone so far and the Grenoble 3 team thus belongs to the circle of marginal contributors, with a more passive appro-

priation, as the tool suited them, which permitted a straightforward technical transfer and only implied a transposition of the scenario, directly inspired from the Spanish development.

The appropriation process goes through a phase of conflict that has been studied in the field of sociology. As underlined by Cros (2001, p. 37)[2], "once the initiators involve other colleagues, perturbations are likely to occur and tensions and power struggle among participants may arise". Such tensions occurred in the project, especially between the technicians and the pedagogical teams, when the Lille 3 reformers got to the appropriation stage. If appropriation pertains to making new meanings by way of negotiations and modifications, then a period of tension is co-substantial to dissemination and can even be seen as a guarantee of creativity. Writing up an agreement between the partner institutions becomes a way to make explicit what each partner will bring to the project and how the resources will be used.

We can also analyse the appropriation process from the perspective of innovation and integration in universities, which is a common topic nowadays. The integration of a multimedia learning environment can be done, in a bottom-up process or in a top-down process. These two opposite ways to disseminate innovation can be ideally met, as stated by Fichez (2002) who considers that "there can be a reciprocal synergy between a kind of "expansionist" process of innovation (when innovation expands thanks to the pioneers who inadvertently encourage imitation by their colleagues, and a rationalized model (in which innovation is imposed by the institution)" (Fichez, 2002, p. 16)[3]. In the last twenty years in France, the process of introducing teaching innovations has become more rationalized and universities have tended to strive for more efficiency concerning both the reduction in costs and time allowed for appropriation. However, this top-down process often occurs to the detriment of the teachers working in these institutions: they usually have to use artifacts without having been involved in the initial decision of buying them (or contributing to them), even if they do not believe these can be of value to teaching. The probability is high that these artifacts remain unused. The main conclusion of this project is thus that the appropriation of a new learning environment (the socialization phase of a new artifact) is a slow process, an element that should not be neglected by institutions when they wish to introduce any given innovation.

[2] Original quote: «À partir du moment où les innovateurs engagent les autres collègues, alors des perturbations fortes apparaissent et des rapports de force et de pouvoir surgissent violemment» (Cros, 2001, p. 37).

[3] Original quote: «Mise en synergie réciproque (...) entre un modèle de type « diffusionniste » des innovations (l'idée que l'innovation passe par l'œuvre de pionniers qui en entraîneraient d'autres dans leur sillage par contagion) et un modèle rationalisé descendant (l'innovation programmée d'en haut)» (Fichez, 2002, p.16).

Conclusion: towards distributed re-design

This case study helps underline that creating and sharing resources necessitates several phases. The malleability of the initial scenario, or its potential for being adapted and appropriated by different categories of institutions for different purposes, seems to be crucial in this process. If the original learning environment is too constrained, contributors' creativity is hindered and appropriation cannot take place. It is therefore desirable for the initiators to take a back seat once the project has grown beyond the original intended context, to allow for various adaptations (semiotic, technical, and pedagogical). The agreement signed by initiators, reformers and contributors is a way to ensure the durability of the project and the different uses it will be put to.

Finally, creating a network, as the one depicted in figure 3, seems a way to make sure all categories of collaborators are taken into account. It also permits design to be distributed among several institutions, which will reduce the cost of adding new resources to the learning environment and ensure a better return on investment both financially and pedagogically. As an indication of the quality of this collaboration across institutions, it can be finally highlighted that all members still contribute to the creation of new resources, which are then deposited on the common portal *Cooplang* and shared by the different universities involved.

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