

Ismael Peña López

e-Learning for Development: a model

CATEGORIES:

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online volunteering
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Right: this is not my resume, but I think you all deserve some explanation on who's writing this blog and why.

My name is Ismael Peña and we struggle everyday trying to keep the Campus for Peace, the UOC's programme for cooperation for development and volunteering, a useful thing for those engaged with development with the help of information and communication

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**e-Learning for Development:
a model**

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We are waking up and linking to each other. We
are watching. But we are not waiting.

The Cluetrain Manifesto. Levine, Locke, Searls & Weinberger.

Dedicating something to someone is always difficult: if it is not a personal gift, you always have the danger to forget somebody really important that would also have deserved the dedication.

I will let, thus, these people for the acknowledgements and simply dedicate this work to the ones not being able to surf this bewildered wave that the Internet – and ICTs in general – is. I *do* hope this new wave of progress will not pass over them and drown them but let them float to the surface of welfare.

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Abstract

Beginning with a very brief case study of a free e-learning for development project, the Campus for Peace of the Universitat Oberta de Catalunya, this paper will try and show how, thanks to the nature of nonprofit organizations, e-learning can solve most of the problems related to corporate training in nonprofits, education for development and e-advocacy for stakeholders. And this paper will try and show also how, just because of the nature of nonprofit organizations too, this can be done for free.

A first part will deal with the free software movement and their point of view that software should be free – free as in free speech, not as in free beer – and have no owners. In this part it will also be explained how this movement, and mainly with the help of Universities all over the world, has entered the world of education and has provided some very interesting solutions such as learning management systems and learning content management systems that can be used for free in any e-learning project under determinate licenses such as GPL.

A second part will deal with the free content movement – not that it really holds this name – and the proliferation of licenses such as Creative Commons' that allow

people and institutions use some contents for free under certain conditions. An interesting application of this content policy and content licenses is in the learning objects field, where there already is a significative development of learning objects repositories, most of them given away licensed or to the public commons.

In a third part we will introduce the concept of the online volunteer, its profile, and the main tasks he or she can hold, being the most knowledge intensive ones those that best fit this profile. In fact, it would be stated that the online volunteer is a perfect knowledge management actor and that knowledge transmission is his or her main role. At the end of this part knowledge transmission will be shaped as e-learning and online volunteers will become remote training administrators, online mentors, e-authors, etc.

We will conclude by mixing the three components (technology, content and human resources) to create a free e-learning project model for nonprofits.

Keywords

e-learning, free software, free content, online volunteering, knowledge management, development, ICT4

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0. Introduction

e-Learning has proved to be a good solution in plenty of scenarios: corporate learning; long-life learning; undergraduate, graduate and postgraduate education; specific training, etc. The nonprofit sector is not an exception, though it seems obvious that, compared to the enterprise sector or the formal education sector, it is far behind in the race towards e-learning¹.

There are many reasons why nonprofits might not be on top of the adoption of e-learning. Lack of IT infrastructure is surely one of them, be it onsite² or in target countries³. Lack of a serious and committed capacity building policy might be another one⁴, especially in Humanitarian Aid organizations and projects where

emergency needs are a black hole that swallows all available funds. But lack of funding is, surely, the main reason why the Third Sector has not already invested in depth in this way of training. Besides some very optimistic approaches, e-learning is neither free nor *that* cheap. It has, of course, large economies of scale and scope, but it also demands material, financial and human resources.

Indeed, the point of view of e-learning benefits for nonprofits might also be rather pessimistic, as it can be difficult to define the return of investment (ROI) of the training projects and even the mere applicability in the reality of these projects. Even concepts such as productivity are rarely dealt with – much less, then, ROI and other business jargon. But that does not mean that NGO's and other nonprofits just do not care at all about these issues. The matter is that their managing is sometimes more complex than other sectors', where everything hits the accounting and the balance-sheet and thus it is easier to add up costs and benefits and figure out the net profit.

Even if the main part of the activity of nonprofits happens outside of their balance-sheet, they surely should know what affects their capacity, how to increase their capacity building, how this capacity will make a difference on their productivity and see that this productivity will directly impact on the potential beneficiaries of their actions. Education, training and capacitation have long been proved to have a positive correlation with all these variables. And there are different points where this training can be placed in nonprofits activities. One of the aspects that will be treated in this paper is whether these training activities can be carried on by means of e-learning. We will, nevertheless, start by defining exactly the critical points where this training – or e-training – can take place and what it can be used for. So far it

¹ ISOPH (2004). Only 39.9% of the respondents answered "Yes" to the question "Is your organization using e-learning?". We should add that 33.0% of these organizations had been using e-learning for one year or less, which is quite a short experience. Then, letting aside this 33.0% of newcomers, the rate of organizations using e-learning for more than one year drops to 26.6%. If we consider that "the results of an Internet-based survey will have a bias towards those organizations that already have access to and are comfortable with Internet technologies. Likewise, we can also assume that organizations with an interest in e-learning were more likely to notice and complete the survey", and that the survey was conducted in the US, the country leader in ICT and e-learning adoption, then this 26.6% is surely *very* optimistic compared to the *real* ratio of adoption of e-learning by nonprofits in the developed countries – much more for the whole world ratio.

² Fundació Un Sòl Món (2002), CONGDE (2005), ISOPH (2004), NPower (2001).

³ Nicol (2003), UNDP (2004).

⁴ Nicol (2003), WSIS (2003a), WSIS (2003b), WSIS (2004) and, indirectly but nevertheless interesting, Warschauer (2002) and Warschauer (2003).

looks like advocacy, capacity building and training for development (i.e. training people in underdeveloped and developing countries) are the three main targets for an intensive use of training programs. We could argue that some transfer of knowledge might be the fourth category in training, but we guess that, all in all, this transfer usually becomes either advocacy or capacity building, so there's no need to consider as a whole category in itself.

On the other hand there's the pragmatics of the impossibility of doing it all, especially because of financial issues, even if the previous digression might sound good. Surprisingly, it is weird to see that the free software movement, composed mainly of software developers who necessarily do not need being associated with nonprofits, appropriated the main added value of these nonprofits, volunteers, and built a whole system of free manpower (hackers⁵), free output (software applications under different licenses⁶) and free content (manuals for that software under other licenses⁷) around them. This experience leads, at least, to two reflections. The first one is evident: if someone did such a huge project as GNU/Linux operating system for free and strictly networking in the Internet, why wouldn't nonprofits succeed in doing something similar? Second reflection is even more evident: half the work is already done.

GNU licenses for free software were not actually meant to let software be free as in free beer, but as in free speech. But the thing is that most of this software is free in all the senses of the word. Availability and suitability of this software to support e-learning projects in nonprofits is one of the three bases of this paper.

On the contents side, though following a different approach and speed, almost the same thing is happening. And not only in software manuals but in contents in general. There are already plenty of initiatives to promote free content in the public commons, some very similar to the ones proposed by the Free Software Foundation, the Creative Commons, and others ruled by important universities or even individuals. As we don't know of the extent and suitability of this free content, a big effort will be made in this paper to make a little research to take a snapshot of current reality and see (1) if there really is any free content at all and (2) how does this content fit nonprofit needs. Free content, thus, is the second pillar that will support our e-learning for nonprofits model. (Free) content creation, which is another option, will be treated in the following section.

Even if technology and content are free, their sole implementation is not automatic: someone must do it. And if we do not plan to design some self learning program, some more manpower should come into the project. Nonprofits historically have been doing training, most of it thanks to volunteers. e-Learning or e-training should not be an exception. On the other hand, online volunteering, just like distance or online education did with formal education, is opening volunteering to some people usually excluded from charity: people with jobs or with families to attend, which makes it difficult for them to be easily available for travel, cooperation or anything at all. But, even most important, it seems that these newcoming people enrolled through and thanks to ICTs do come with a brand new profile, a profile whose main added value is knowledge.

⁵ Himanen (2003).

⁶ Please see the annexes for an overview of the GNU licenses.

⁷ See note 6.

Thus, e-learning, which is basically knowledge transfer, can become doubly good: it can make training accessible to people usually banned from training, and it can be the means to transfer this newcoming knowledge nonprofits got out of the blue when enrolling online volunteering. And this is the third and most valuable pillar of what we will describe here.

Summing up, what it is to be presented in this paper is a study and a model on how nonprofits can set up e-learning projects based on three pillars: free online learning platforms, open access content and the concurrence of unselfish human resources (volunteers). At the end of the study, the model is tested for its suitability and possibilities to be carried on.

The study begins with a case study of the Campus for Peace of the Universitat Oberta de Catalunya that has set up an e-learning for development program based on giving away for free the know how and technology of the University to nonprofits, carried on by online volunteers.

An open version of the model is presented here where the University's technology and content are substituted by free software and open access content. The procedures of the study are then simple: we will test, step by step, each component of the model – technology, content and human resources, or, in other words, free software, open access content and online volunteering – and see whether these parts and the whole conform a valid model to bring e-learning to nonprofits and development projects.

The structure of the text that follows is that of a tree: each one of the components – the pillars – of the model, plus the case study, are developed as an isolate branch, with detailed information in the corresponding Annexes, the core of the text presenting only those parts related to the methodology

and the main results. Nevertheless, some partial results are presented in the Annexes. Though a little bit heterodox, these proceeding has been followed with the aim of treating each concept on its own, with its own partial conclusions and findings, and mixing them in the core text where only force ideas are highlighted and developed.

1. Justification

It has already been widely proved that education is a must for development. Just after the satisfaction of the basic needs – feeding and health, which, in fact are about the same thing – the first steps to develop a community are bringing them infrastructure⁸, training and education. The question is, then, if there's a place for virtual education or, put in different words, if some part of this training and education can be virtualized.

Of course, there is a previous thing to consider: do we have the required infrastructure to run these educational projects? The answer is somewhat linked to the behavior of the developing agents engaged with the tasks of enhancing the situation of a local community. Besides the projects run by local Administrations, the developing agents – and cooperation for development agents – are the ones that usually foster the use of new technologies, methods, proceedings, etc. and the capacitation for their use. It is, thus, the aim of this paper to focus on these intermediate agents and see (1) how they can improve their own performance and (2) how they can act as promoters and facilitators of this technology.

1.1. Why on-line learning in cooperation for development projects and organizations

The best way to understand how online learning can benefit nonprofits is looking at it from the point of view of the educational/training needs and the main reasons why these actions are not carried

⁸ We could argue whether Governance issues are part of these infrastructure – social infrastructure – or not, but it is neither the aim of this work to enter this debate.

on: lack of time, lack of financial resources, geographical barriers or commuting difficulties to attend onsite training, impossibility to expatriate the trainer, etc.

Online learning allows, in most cases, to overcome these barriers:

- Making possible training: when other models have proven non-viable, virtuality can be the only option
- Training without boundaries of time or space (asynchrony and ubiquity). This also implies a huge increase in the accessibility of training, which might be of special importance for rural communities or nonprofits with a big decentralized network of headquarters, offices and expatriates
- Possibility to adapt and customize the educational action, incorporating south-south collaborations, more interculturality, sensitivity towards local socioeconomical reality, etc.
- Making economies of scale possible, thus making training sustainable in the medium run or for a greater number of people, possibiliting the increase of these trainees with lesser effort and easing the replicability of the educative action
- Enhancing the feedback and virtuous circles of the process: through training for trainers, the once trainees become trainers, giving positive feedback to the process by bringing local knowledge. Feedback, at the end of the project, becomes a powerful tool for the empowerment of the target community

1.2. On-line learning in cooperation for development projects and organizations: what for?

1.2.1. Training of the cooperation for development agents

NGO's – and nonprofits in general – consist of people on staff, volunteers, expatriates, punctual collaborators... All of them need training and have some specific skills to carry on. All of them need some training and specific skills to carry through their responsibilities.

Courses about cooperation for development, humanitarian law, volunteering management, cooperation projects management, accountancy, desktop applications, foreign languages, etc. can be imparted and followed through the Internet, thus easing the training receivers to follow the courses comfortably and also enabling the organization to include as trainers those who are the real experts in the subject – not the ones just available –, besides the concerns about commuting or attending to onsite sessions.

1.2.2. Advocacy

There're some organizations whose aim or mission is just letting people know about or reporting human rights violations, unequal wealth distribution situations, etc. It is then a key for success to reach the biggest possible number of people. The same effort invested in a determinate action can be focused to a virtual action where the potential target will be the whole world – or, at least, the part of the world connected to the network and understanding the language of the action. Indeed, the learning materials and the exchange of experiences could be reused for future training editions or by people interested in one specific area of interest.

By the way, advocacy might also work as a good means to demonstrate transparency within nonprofits and keep their stakeholders informed of their actions or their philosophy.

1.2.3. Capacitation for development

Once the technology has reached developing and underdeveloped countries – and this is becoming more and more feasible thanks to huge infrastructure programs to foster ICTs – it is easier to let their less favored communities get reached by knowledge, a transmission of knowledge that, until now, was only possible through expensive travel and mobilization of experts or people to be trained.

Energy resources management, setting up of water systems, micro credit, self entrepreneurship, cooperativism, digital literacy, infectious diseases prophylaxis and treatment, and a long etcetera of possibilities that, sometimes, require presence, but that in many others can be solved virtually or be extremely eased by virtualizing a part of the training project.

1.3. Free software as in free speech... and as in free beer

1.3.1. Free software as in free speech

The Free Software movement philosophy relies on giving the user of a program the four kinds of freedom⁹:

- Freedom 0: The freedom to run a program, for any purpose.
- Freedom 1: The freedom to study how the program works, and adapt

⁹ Gay (2002), p. 41.

it to your needs. (Access to the source code is a precondition for this.)

- Freedom 2: The freedom to redistribute copies so you can help your neighbor.
- Freedom 3: The freedom to improve the program, and release your improvements to the public, so that the whole community benefits. (Access to the source code is a precondition for this.)

All in all, it can be summed up as “build on the past, improve and share”. Thus, this philosophy is quite similar to that of nonprofits, and the way the hacker community works¹⁰ is quite similar to the way the nonprofit community – composed mainly by volunteers – also works and should expect from the technological support of e-learning¹¹:

- Open Philosophy
- Possibility of Localization
- Learning from Open Source Code
- Encourage Innovations
- Build Long-term Capacity
- Reliability, Performance, Security

If we add these features to the possibility to redistribute copies (Freedom 2) and release the improvements to the public (Freedom 3) the reason for choosing free software to run nonprofit e-learning projects is quite evident: there’s a need to have the most freedom possible – freedom as in free speech – to remain coherent with the aims and goals of the nonprofit for development sector:

- help your neighbor

There’s yet another point not to forget, and it surely is one of the main reasons why

local administrations – especially outside the US – have been running lately digital inclusion programs based on GNU/Linux applications¹². This point deals with local economy development or, according to Economics definitions:

- endogenous development

In developing programs it is important, more than the help you bring, to avoid doing any harm. By using proprietary software, and making local organizations use it, a link of dependence is created with the software developer. If this developer is a foreign firm – which is what happens most of the time – the link has a direct negative impact on the local economy as it will suppose the exit of financial resources. On the other hand, running free software applications not only does not create this negative link but helps developing a local economy of software development: open source and freedom to change and improve means further development will not necessarily be carried by foreign enterprises, and local agents can participate, thus empowering the local economy instead of just making it sink a little bit lower.

1.3.2. [Free software as in free beer](#)

But besides philosophical considerations, there’s the point of view of seeing free software free as in free beer, not free speech.

Going back to Tong (2004), there are two other issues, completely in the financial field, to be taken into account when talking about free software:

- Lower Costs
- Alternative to Piracy

¹⁰ Himanen (2003).

¹¹ Tong (2004).

¹² <http://www.linex.org>.

Most nonprofits do not have a lot of income as they do not take part in the “profit economy”, meaning by this that they do not produce anything to be sold, and do not get a profit for its added value. It is then really important – much more than in the second sector – to keep costs as low as possible. And free software is usually cheaper to develop, if not *free* to get. What is understood doesn’t need to be discussed.

1.4. Free knowledge

Besides technology, which has been covered in the previous section mainly about free software, we do need the knowledge that is going to be transferred... and the knowledge on how to do it.

On one hand there’s the content on which the learning actions will be based. On the other hand, there are the people that will carry through the educational action, including not only the *lecturers*, but many other roles.

1.4.1. Free content

We won’t consider the creation of content in this paper. Content creation usually implies certain costs and, more importantly, the author should be trained on the virtual learning philosophy, methodology, technical issues, etc. On the other side, one thing is *content*, as some information or knowledge that is put black on white, and a very different thing is a learning object.

Thus, we will keep in mind two important aspects when dealing with content within the framework of this paper.

First aspect is that content must be a **learning object**. Even if there is no consensus on what a learning object is – and with independence of there being a single definition – we will use this concept to define any content with educational

purpose. This educational purpose should be explicitly reflected by, at least, three points:

- A clear, concise, perfectly delimited subject to be trained¹³. A syllabus defining its content is not a must but could help. Goals to be reached by people following the material should be included.
- A clear target of people for this training material¹⁴
- A learning path, a schedule, (self)evaluation issues, etc. that help content be delivered along the course

Second aspect is that this learning object should be **free to use**. Free to use may mean a very big range of possibilities, including aspects such as attribution, commercial vs. noncommercial uses, the possibility to make derivative works^{15 16} and all the different appreciations the Creative Commons Licenses and the Free Software Foundation Licenses define. Of course, over the licenses, there’s the Public

¹³ “History” is not a delimited subject. “Spanish XIX Century History” is.

¹⁴ “Kids” is not a delimited target. “Secondary Education” or “Kids from 14 to 15 years old” is.

¹⁵ This is sort of related to freedoms 1 and 3 in free software

¹⁶ The Creative Commons include “share alike” issues, just like free software foundation licenses include “copyleft” issues. This aspects won’t be treated here because they deal with the reproduction or further uses of a changed work, being the goal of this work to think about direct uses of learning objects (and software)

Domain¹⁷. All these aspects and possibilities will be analyzed in this paper and kept in mind when analyzing the different objects of study. A complete list of licenses appears in the appendixes.

1.4.2. Online Volunteering

As in free content, online volunteering is about “free knowledge containers”. There’s a great tradition of volunteering worldwide and surely there’s no need to describe it at all. Put it simple, volunteering deals with unselfish work done without any kind of compensation – especially money – and focused on nonprofit goals, be it development or solidarity, or just other associations dealing with political, cultural... issues.

Notwithstanding, there is *not* a great tradition in *online* volunteering, not even a short tradition. The reason is simple: the World Wide Web was born in mid 1990s¹⁸

¹⁷ The Wikipedia defines the Public Domain this way: “The public domain comprises the body of all creative works and other knowledge—writing, artwork, music, science, inventions, and others—in which no person or organization have any proprietary interest. (Proprietary interest is typically represented by a copyright or patent.) Such works and inventions are considered part of the public’s cultural heritage, and anyone can use and build upon them without restriction (not taking into account laws concerning safety, export, etc.).”

While copyright was designed to promote the development of arts and sciences by giving a (financial) incentive to the creator, works in the public domain just exist as such. The public have the right to use and reuse works in the public domain without financial or social burden. When copyright or other restrictions reach the end of their life, works are said to revert to the public domain.”

¹⁸ Most consider the birth of the web the appearance of the first web browser in 1993 and/or its popularization in 1994.

and one of the first online volunteering projects, the Virtual Volunteering Project by Impact Online, dates from 1996 following the thoughts of Steve Glikbarg and Cindy Shove during the preceding two years¹⁹. Our opinion is that there is not even a clear taxonomy nor a typology of online volunteering, though quite a good bunch of Internet portals talk about the benefits of online volunteering by giving good – and real – examples.

Our commitment in this paper is double. First of all, we will try and include online volunteering as the third pillar in free e-learning for development and see what the chances are to find these volunteers and who is working on or easing their recruitment.

On the other hand, while United Nations Volunteers do have a virtual channel – Onlinevolunteering.org – to foster online volunteering, and Service Leader, the heir of all the work done by the virtual Volunteering Project, also plays an important role in the field, we still suspect there’s a complete mess in the definition of what an online volunteer is and does, at least in a more conceptual way far from the “best practices” approach of these two institutions. Thus, we will try to find or define a taxonomy and typology of the online volunteer and try to see its role in a free e-learning for development project.

¹⁹ Ellis and Cravens (2000).

2. Purpose

The purpose of this study is to find the existing **possibilities to run an e-learning for development project for nonprofits based on free software, free content and online volunteering** – according to the existing resources available mainly in the Net – and thus **define a model**.

To do so we will first study briefly the existence of such an experience and perform a micro case study, that will serve as a guideline for the later analysis.

So, thanks to – or besides – the real experience(s) found, we will then check for the existence and suitability of its main parts: i.e. free software based e-learning platforms, open access to development and cooperation for development e-content and online volunteers to perform online mentoring and training²⁰.

Lastly, we will define the model according to the conclusions given by the independent analysis of the different parts.

Thus, our hypotheses are:

2.1. Technology

- Are there applications for e-learning that can be used in e-learning for development?
- Is there any kind of specific licensing to be used for free?

2.2. Content

- Is there content that can be used in e-learning for development?
- Is there any kind of specific licensing to be used for free?
- Is this content ordered and categorized or catalogued? Are there categories related to development and/or cooperation for development?

2.3. Online Volunteering

- Is there a clearing-house for online volunteers?
- Are online volunteering offers catalogued in opposition to offline offers?
- Are online volunteering offers catalogued according to tasks to be performed?

²⁰ We will go deeper in the online volunteer profile to run e-learning projects in a following section.

3. Methodology

3.1. Case (micro)Study²¹

Our starting point is the experience held at the Campus for Peace, the main project of UOC Cooperation, the cooperation for development program of the Universitat Oberta de Catalunya²².

The analysis of the Campus for Peace has led us to the identification of the critical parts of an e-learning for development project, which are the ones featured in Figure 1

The model is not exempt of simplifications, but, nonetheless, it is very useful to trace some guidelines and, over all, to break into parts the whole analysis so the approach is easier to perform. Thus, from now on until the global results and conclusions, we will proceed in parallel.

The exposition and the research itself followed a practical sequential approach: where/how (technology), what (content) and who (online mentors). This model could be criticized in benefit of a more conceptual approach: somebody (online mentors) decides to teach something (content) and, according to this, decides the best way to do it (technology). We subscribe this approach once we know the whole map of the proceedings. But Internet history has gone just the other way, and this is the way we should follow in order to understand some linked concepts such as the GNU Licenses and their clones for content, the Creative Commons Licenses²³.

²¹ For extended explanation, see Annex 01.

²² <http://www.uoc.edu/cooperation>.

²³ Everything stated here is explained in depth in Annexes 02, 03 and 04.

3.2. Technology²⁴

Thus, first thing we did was dig a little bit on this History of the Internet²⁵ and start by learning more about the philosophy underlying the concept of open access²⁶ and Free Software²⁷. We also entered the different conceptions of open access in software, i.e. free software and open source software and ended by studying the different licenses and their evolution in content.

We opted to group all of them²⁸ under a generic concept of Free-Libre Open Source Software (FLOSS) that, applied to educational purposes, becomes FLOSSE. The main criterion to do this was that all of them allowed free downloading, installation and customization, meaning by free, as always in this study, at no cost and with total freedom for the user.

Following with software, we then looked for

- a) Scientific literature on how FLOSSE should have an application in education²⁹
- b) Scientific literature on how FLOSS should have an application for nonprofits³⁰

²⁴ For extended explanation, see Annex 02.

²⁵ Castells (2002), Himanen (2003).

²⁶ Suber (2003), Suber (2005).

²⁷ Gay (2002), Free Software Foundation (2001), Free Software Foundation (2004). For more bibliography on the matter, read along Annex 02 and its footnotes.

²⁸ GNU GPL, GNU LGPL, CC-GNU GPL, CC-GNU LGPL, Open Source Software, etc.

²⁹ Amatriain (2004), Arina (2004), Coppola and Neelley (2004), Downes (2004), Downes (2005), IIEP (2004), Leslie (2003), Siemens (2003a), Tong (2004), Trucano (2005).

³⁰ ISOPH (2004), Murrain (2004), NPower (2001), NPower (2004).

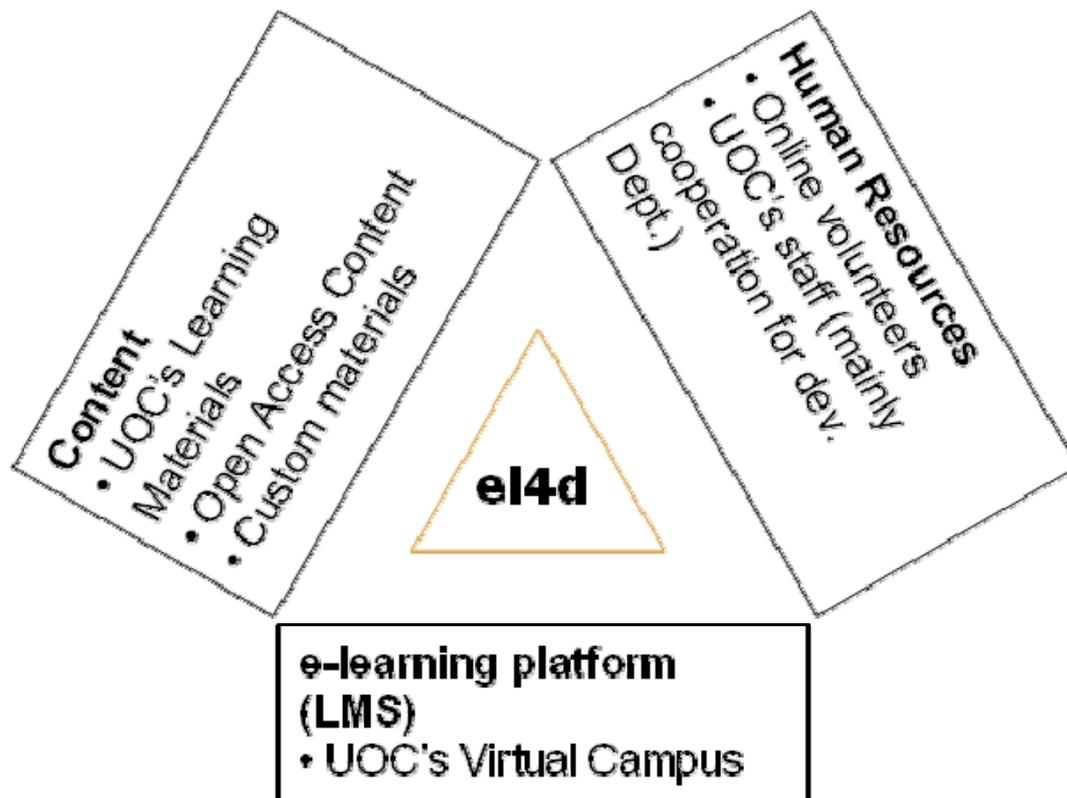


Figure 1: Three pillars of e-learning for development at UOC Cooperation

- c) Merging of point (a) and (b): introduction of FLOSSE in nonprofits³¹

and ended by using the study *Open Source Courseware – Evaluation and Rating*³² as the basis of our research to evaluate the availability, suitability and sustainability of choosing a Free Software Learning Management System for our purposes. In fact, Reynolds's study is but a comparison among platforms.

³¹ Baumgartner (2005), Hawkins (2002), Junta de Extremadura (2002), Margulies (2004), Moyle (2004), Peña (2004), Reynolds (2003), Siemens (2003b), Zondergeld (2004).

³² Reynolds (2003).

Notwithstanding, to be able to compare he analyses the features of the different platforms and the suitability of the software under a technological point of view and also under a pedagogical point of view, which is what gives an added value to his study and what conformed the last part of the research on this section.

3.3. Content³³

A similar path is followed, at least in its beginning, when studying open access or free content, the history behind and the

³³ For extended explanation, see Annex 03.

licenses under what this content can be used.

After a first checkout of the literature³⁴, which was but complementary to those of Free Software, as they are very closely linked, we proceeded to analyze the different existing licenses³⁵. As it had happened with free software licenses, we quickly decided to group those allowing free use – even if it was with restrictions – away from those who did not permit any kind of fair use or that required the paying of fees and/or had restricted uses. Public Domain, GNU FDL and the Creative Commons Group were considered as *free content*, leaving behind all other proprietary³⁶ licenses.

The symmetry with the analysis performed in the Technology section ends here. Even if there are different conceptions on what a Learning Management System is and also different names³⁷, there is something approaching a consensus. This just does not happen when talking about learning objects. The solution was quite a Salomonic one³⁸: once minimum and basic requisites were found³⁹, and after testing with some

colleagues, the decision was to consider **learning objects** the ones that:

- Had a clear, concise, perfectly delimited **subject** and **content** to be taught
- Had a clear **target** of people for this training material
- Had a concrete **syllabus**: learning path, schedule, (self)**evaluation** issues, **activities**, etc. to help content be delivered along the course
- Were specially designed for **online learning**

We will see in the Conclusions that some of these conditions did not fully apply – especially the last one, which was a very restrictive condition.

The natural place for these learning objects to be gathered was a **learning objects repository**, so we scanned the web and the main educational directories to build our own learning objects repository list⁴⁰. This list was reinforced with development and cooperation for development portals holding learning objects – usually self paced ones – and other web sites with training content that could not be considered repositories⁴¹.

The choosing of the sites was reinforced with two more parameters: Google PageRank⁴² and the number of objects hosted, as a means to test the level of popularity and intensity of use of the site⁴³.

Once we had defined the licensing status, the holder of the content (the learning object) and the holder of the holder

³⁴ Over all Lessig (2004), but also Correa (2005), Margulies (2004), Monge (2003), Papathéodorou (2000), Siemens (2003b), Suber (2005), Creative Commons (2005a).

³⁵ Creative Commons (2005b).

³⁶ We use here the term *proprietary* in the same way it is used in the free software movement: no full user rights at all, even if paying for the content.

³⁷ See introduction to Annex 02.

³⁸ Even if the Internet is full of valuable content, we focused our study in content that had been previously thought for training purposes – sometimes slightly – and then had a determinate architecture. Though the concept of “(e-)learning object” is quite a debated one, we stocked to it to (1) ease the study and (2) keep the study within its boundaries, thus avoiding other debates that can be separate studies on their own.

³⁹ Gibbons et al. (2000), Wiley (2000b).

⁴⁰ See Table 2, Table 3, Table 4 and Table 5 in Annex 02

⁴¹ I.e. not a database behind, not searchable, not categorized, etc.

⁴² Google (2005).

⁴³ Last parameter is especially relevant when the site is fed by the user instead of a promoting institution.

(learning object repository), we then categorized the content found to be able to detect the main categories involved in development and nonprofits training and education.

Two classifications were made, one *ex ante* and another one *ex post*. As per the *ex ante* we used the Creditor Reporting System code (CRS code⁴⁴). As per the *ex post* we used what the cruel reality showed, and then categorized our findings in:

- **Development:** repositories with subjects mainly related to those of the CRS code
- **Diverse:** subject of diverse thematic, usually popular diffusion of science
- **Scholar:** mainly subjects closely related to higher education or with a deep specialization in one scientific field
- **Nonprofits:** those with a focus on nonprofits empowerment and/or nonprofits capacity building

As it was done with technology, a further study on availability, suitability and sustainability of this content for our purposes was performed.

3.4. Online Volunteering⁴⁵

The last part of the study followed, again, the same path that the parts corresponding to Technology and Content but, as in Content, it soon chose its own way because, even more strongly than in Content, most of the concepts were confusing.

The first thing that had to be done was to define a **Taxonomy of Online Volunteering**, where the concept of Online Volunteer was accurately defined, its

⁴⁴ OCDE (2004).

⁴⁵ For extended explanation, see Annex 04.

synonyms established and the false friends unmasked, categorized and defined properly⁴⁶. We propose:

- a) Online Volunteer as the one whose “volunteer tasks [are] completed, in whole or in part, via the Internet and a home or work computer”⁴⁷. Synonyms are virtual volunteer and e-volunteer
- b) Avoiding the confusing terms telementor and teletutor, and avoiding at all the even more confusing cybervolunteer and cyber service.
- c) Using properly – and not as an Online Volunteer synonym – the concept ICT Volunteer

After the Taxonomy was defined, a **Typology of the Online Volunteer** was required: among all the multiple tasks that can be performed through the internet, only some might be considered volunteering and some others might not. And within the ones that might be considered volunteering, just a few of them could help or take part in an e-learning for development project. The proposed typology is as follows:

- a) **Type I: Online Advocacy**
- b) **Type II: Online Assessment**
- c) **Type III: Onlined Offline Volunteers**
- d) **Type IV: Pure Online Volunteers**⁴⁸

Before finishing, a list of the main **volunteering matching sites** was built, mirroring the proceedings used in doing the learning objects repositories list. Again, a prospecting of volunteering directories and portals pointed us to the main volunteering matching sites. Some nonprofit virtual communities were added and so were some other independent sites. To measure

⁴⁶ For this issues helped Ellis & Cravens (2000), Nilles (1998), UNV (2004) and Murray & Harrison (2002).

⁴⁷ Ellis & Cravens (2000).

⁴⁸ For a more complete definition, please see Annex 04.

popularity PageRank, number of volunteering opportunities and number of online volunteering opportunities – when available – were used as parameters. We also added a parameter to point the existence of an Online Volunteering Section or filter and, when not available, the possibility to perform an open text search.

Presence of Online Volunteering types I, II, III and IV was also searched in the sites, spanning type IV in subcategories concerning the main roles or tasks in an e-learning for development project in the fields of Planning, Teaching and Managing⁴⁹.

The conclusions and the habitual study of availability, suitability and sustainability of this kind of volunteering for our purposes brought us to define four types of portals according to the treatment they gave to online volunteering.

⁴⁹ See the complete information in Table 14 in Annex 04

4. Results

As we have done along the whole work, we will present also the results by sections, leaving for the conclusions the merging of all of them to give a comprehensive point of view.

4.1. Technology

The results in the technology section have been fed mainly by bibliography, as it was an already explored in depth field.

The main work used⁵⁰ analyzed 19 learning management systems, being only 2 of them not licensed under any of the licenses considered. On the other hand, the study did not gather data about new platforms such as DrupalEd⁵¹ or EduPlone⁵² that are entering the “market” of FLOSSE with strength.

In Annex 02 we show there is still a controversy on whether FLOSSE is good or not for nonprofits and whether it is good or not in front of proprietary software, especially related to the total cost of ownership.

Nevertheless, we do believe that the problem is a lack of studies on the subject and that the debate is not whether FLOSSE is good or not, but that it is yet to be demonstrated. We do believe that evidence in best practices is showing, day by day and increasingly, the effectiveness of free software for nonprofit issues.

⁵⁰ Reynolds (2003).

⁵¹ DupalEd (<http://www.drupal.org>) are learning tools (distributions) based on Drupal (<http://www.drupal.org/>), the open source system used as an online community tool and/or content management system.

⁵² EduPlone (<http://eduplone.net>): same as stated in footnote 51 but based on Plone (<http://plone.org/>).

On the other hand, the adoption of free software in the field of development and cooperation for development, *ceteris paribus*, should be mainly lead by a political debate rather than a technological one. Reasons stated by the Junta de Extremadura (2002) or Mas (2005) related to endogenous and local development should have its full weight in ICT policy making and its correct relative weight when evaluating costs, benefits, social impact, etc.

Nevertheless, our conclusion under a strictly pedagogical point of view – and we insist that this is a too much partial consideration in the subject we are dealing with – it seems clear that most free software solutions do fit the educational needs, being the proof of it the growing adoption of FLOSSE by universities and higher education organizations.

4.2. Content

The main question, the practical one, we posed about content was if there is some content that can be used e-learning for development under minimum quality conditions. The short answer is no. The long one is no, there is none.

Of course, the Internet – the World – is big enough to have let aside interesting sites, projects, repositories, initiatives, people, etc. So, if we had to be humble, we should at least recognize that there is a probability different to zero to find these materials. Nevertheless, we should not forget that the normal user of the Internet – not to speak of the newcomer or recently digital literate⁵³ –

⁵³ Warschauer (2002), Warschauer (2003) and Ortoll (2005) are very interesting starting points on what digital literacy is – or should be – and the crucial difference among technological literacy and informational literacy. This last one is the one that, in the end, really matters once the elemental skills in the use of the desktop applications are mastered.

is not an Internet digger but an Internet surfer. If content does not come to him, he will surely pass it over without noticing.

What all this digression means can be summarized as follows:

- There is a clear way to license – and thus use under those licenses – content for different purposes different to profit, even an specific license to use it in developing countries⁵⁴
- There is a problem with the definition on what a learning object is
- and also a problem in calling “repository” what, with clear evidence, is nothing but a static website with a bunch of links, non categorized items and items not properly stored in databases stored in non searchable sites – just to mention a few.
- Most *real* learning objects repositories are targeted to formal education, especially higher education, and do not have neither categories nor objects susceptible of being used in development or cooperation for development training programs⁵⁵

Added to these four points, there is a fifth one and it deals with an emerging training sector whose target is nonprofits. This sector works the same way plenty other enterprises make profit from addressing other enterprises and selling them corporate learning. It is true that some of the institutions addressing to nonprofits are, at the same time, nonprofits too, usually foundations, that only charge in their fees the costs of running the courses and their structure. A sustainable model as it is, on

the other hand, we do not find the philosophy of sharing so common in nonprofits. We would like for these foundations a model following MIT OpenCourseWare, where enrolment in usual courses is not free but learning materials are available for the general public.

This desolating panorama in open access content is however sprinkled with some good examples that, even if testimonial, show a good commitment and a promising starting point in sites such as Civicus, WebJunction, TrainingPoint and UOC Cooperation, if this last one considered on opening in the future the learning materials it already gives for free through its nonprofits courses⁵⁶.

These good examples do follow the path stated in Annex 03 as desirable: learning objects – in a quite generous definition, notwithstanding –, in the field of development and nonprofits and properly categorized within these subjects. They fail in the use of databases to store, manage and offer them properly to their users, but this part is no doubt more a financial issue due to the lack of funding of those organizations more than a political or a wanted decision.

4.3. Online Volunteering

The results around online volunteering are, aggregated, similar to those of content but, in detail, radically different.

Aggregated means that online volunteering is yet too young to be considered a powerful tool for most nonprofits and its use is really in a very low level in comparison

⁵⁴ See Creative Commons (2005b) for the *Developing Nations* license.

⁵⁵ Besides higher education training in developing countries, but this is not the point.

⁵⁶ The own author's *ICTlogy Courses* would like to become an example of good practice in the field, but is in a very embryonic state of development.

with traditional volunteering⁵⁷. Extrapolated to the highly specialized level of online volunteering that requires our e-learning for development model, the conclusion is that there is still a long way to walk before this kind of volunteering becomes natural or even usual.

In detail, the characteristics of the lack of open access content for development and online volunteering is radically different.

Content is highly structured, defined, categorized, localized, stored, etc. in the scholar world⁵⁸. We can say that everything is prepared to enter the world of development and that it is only a matter of time and resources to do it but, once this happens, it will be done in the most correct of ways.

Online volunteering has grown – surely because of the same nature of the different institutions and goals behind the academy and nonprofits⁵⁹ – in a disordered way. First of all, the concepts are not clear: there are different names for the same concept, different concepts for the same name, and treacherous words that do not reflect with precision the whole width of online volunteering. And this brings us to the second point: we have drawn even four types of online volunteers. There might be more or our typology might be an exaggeration and the ambition of the academic to name simple things in a

complex way. Never mind: the sole existence of uncountable categories for traditional volunteering against zero categories for online volunteering is a proof that this is a rather unexplored terrain.

Of course – third point – this has a negative impact in volunteering matching sites, that usually do not have an online volunteering category or, when existing, is, as said before, uncategorized⁶⁰.

This lack of everything makes really difficult to address the proper volunteering opportunities to the proper public to run e-learning for development projects if you do not have the luck to work in a closed virtual community such as UOC's, a 100% virtual university.

4.4. Model of e-learning for development

So far, it seems that the partial results on technology, content and volunteering are quite meager and, maybe, discouraging for those who believe in the power of ICTs for development.

The model set up by UOC Cooperation⁶¹ is a very successful one, been running since 2001 and with hundreds of people trained to accomplish goals in advocacy, corporate capacitation in nonprofits and education of underdeveloped communities.

After this success, we have described here an “open” version based on free software – instead of the University's technology –, open access or freely licensed content –

⁵⁷ Murray & Harrison (2002) state this clearly, but it is easy to deduce by CONGDE (2005), that even does not mention it, or looking at the use of Internet by nonprofits in Franco (2002).

⁵⁸ We will forget, for a moment, all the academic debates related to the nature of learning objects, metadata, repositories, and so.

⁵⁹ We mean, by this affirmation, that for the academy content is a must, a basic tool for their daily tasks, while for nonprofits, volunteering, is also a tool, a means, and an important one, but it is not their mission to raise volunteers – except for a little number of volunteering institutions, of course.

⁶⁰ Soluciones ONG and ProHumana – explicitly – and some other portals with the shape of online communities of experts include a sort of tagging or classification of fields of expertise. This could be considered a draft of the categorizing that the sector required, but are yet too simple and too infrequent to be considered seriously in the study.

⁶¹ See Figure 1 in section 3.

instead of the University's content – and online volunteering. Our aim with this study was to see whether the successful e-learning for development model at UOC did work in an open version.

A first interpretation of the results should lead us to say that no, no open version is possible. Notwithstanding, a deeper analysis should bring us to a “not yet” answer.

e-Learning is not already a mature discipline but distance learning and human-computer interaction are, and their respective heritage is being the basis on which e-learning models lay. Thus, the weak part of an e-learning for development model is not “e-learning” but the “for development” part. This weakness can be found, as in this study, in the substitution of some of its components by free components or in other infrastructural issues related to hardware – low cost computers or less energy consuming computers – or connectivity – wireless connections or satellital access to the Internet.

Said that, we do think that the problems that we have found are mainly circumstantial and related to the present situation of incipient implantation of ICTs, but neither structural nor conceptual. We believe that, even if it is still soon to show terrific projects and their spreading all over the world in a legitimate way and with little effort, the strength with which the free software movement is spreading, the furious debate over the revision of the intellectual property rights and the exponential appropriation of the Internet by the civil society will pave the way of the implantation of the future trends of e-learning in nonprofits and in underdeveloped or developing countries.

Future lines of work

We would not like to close this study without giving some hints on

- a) What to do *with* it
- b) What to do *after* it

We have, at least, three groups of reflections, doubts, proposals we would like to bring to the academic and the nonprofit community.

First one deals with the problems found in the study and *ex ante* things that should be performed or agreed before going further in the subjects dealt with in the study, especially online volunteering. It is, over all, about defining the framework we are in.

Second one is finding a real use or a practical application to the findings – if any – in this research, a means so that there can be a real improvement in the work of nonprofits and, most important, in their capacity and their capacity building.

Last, and more endogamic, how this research could be improved, followed or derived.

5.1. New definitions

We think a consensus on some definitions should be reached. At least, it would ease second editions of this research. At its best, it would ease the search for online volunteering opportunities, the definition of the requirements for online volunteers, the correct binding of tasks to be performed, etc.

5.1.1. Taxonomy of Online Volunteering

We suggest the revision of the concepts of online volunteer, virtual volunteer, e-volunteer, telementor, teletutor,

cybervolunteer, cyber service and ICT volunteer.

We give our proposal in section 10.1. Taxonomy of Online Volunteering

5.1.2. Typology of Online Volunteering

We suggest starting to work, if not in the definition of a typology of online volunteering, at least in the implicit use of such a typology, to help the guiding of either future volunteers and volunteering institutions in a correct matching of interests and profiles. All in all, in a better understanding, from all parts, of the possibilities and limitations of online volunteering.

We give our proposal in section 10.2. Typology of Online Volunteering

5.1.3. Volunteering Matching Sites

We will not suggest the definition of a typology of the different volunteering matching sites existing, but we do invite the promoters of these sites to spare some time for themselves and think who their target is, how to address it and how to work with it – supposed their mission or aim is not only volunteering matching but running online volunteering projects, i.e. in the form of an online community of experts.

We think we give some advice or hints in section 10.3. Volunteering Matching Sites

5.1.4. Development and cooperation for development kinds of content

As it happens with the scholar community, the identification of the most relevant interests in training by nonprofits should lead us to the categorization of the content that is the vehicle of these interests. The

categories are there – given by the OCDE⁶² – or by any of the numerous international or humanitarian organizations: it is just a matter of applying them to sort content according to nonprofits' needs.

5.2. Actions

5.2.1. [Repositories portal](#)

It is evident, by the conclusions presented, what the first action should be. We suggest getting on the right way the existing – and inexistent – resources aimed to help nonprofits in their training matters: **the creation or improvement of a portal holding a correctly categorized learning objects repository in the field of cooperation for development and development.** As we have already said before, there are some good seeds in some existing initiatives in the World Wide Web. Nevertheless, they are far from being a strong reference in these issues and they are clearly not even the shadow of other academic portals for i.e. higher education.

5.2.2. [Sourceforgization of the online volunteer for development movement](#)

Reading like Himanen (2003) and Papatheodorou (2000), or projects like Volunteer 2 Volunteer run by the Portal do Voluntário⁶³. In our opinion, during these last five years online volunteering has been promoted in an individual point of view: “you’re an NGO working here and there, you have some cooperation for development projects, I want to volunteer, I cannot go here and there, but I have a computer, what can I do?” This is a must, but it is also just phase I.

Phase II should benefit from the enhancement of personal communications to create real virtual communities such as the free software movement, where both the communities and the projects have their birth in the Internet itself, with no need to be born in the offline world, being not the Internet their means, but their sole nature.

The digital identities of volunteers in the Internet, boosted by social software, should be able to find or create a place the like of SourceForge.net⁶⁴ where cooperation projects based on online volunteering could take place.

5.3. Further research

5.3.1. [Online Volunteer profile](#)

We have stated, explicitly and implicitly, that the online volunteer is a knowledge manager in the nonprofit sector. It seems evident to us as, through the Information and Communication Technologies, the only things that can be transferred are data, information and knowledge: this is just what its nature is about.

Tacit knowledge, or the knowledge held by people in their brains⁶⁵, is fed mainly by two streams: training and experience. We guess it should be an interesting research to track the training and experience of the actual online volunteers to check if their background corresponds to the necessary profile of the knowledge holder and manager. Indeed, and besides training and experience, the profile should include

⁶⁴ See McGovern (2004) for a brief presentation on what SourceForge.net is and represents to the free software community. Himanen (2003) can help in understanding the conceptual point of view.

⁶⁵ We will stick to this informal definition and not enter a rigorous definition of tacit knowledge, which can be held by institutions, procedures, etc.

⁶² OCDE (2004).

⁶³ <http://www.portaldovoluntario.org.br/v2v.php>.

socioeconomic variables, former experience as onsite volunteer, etc. so nonprofits could direct their efforts to the most adequate target for online volunteering.

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7. Annex 01: UOC Cooperation⁶⁶

In this annex we will describe briefly how the NGO capacitation project at UOC Cooperation works, based on the free provision of a virtual campus, online learning materials and the collaboration of online volunteers.

UOC Cooperation⁶⁷ coordinates and promotes the cooperation for development activities and strategy of the Universitat Oberta de Catalunya⁶⁸, a 100% virtual University born in 1994 in Barcelona, Spain.

7.1. The University as a cooperation agent

In the year 2001, the Conference of Directors of the Spanish Universities, approved its document "Universidad: compromiso social y voluntariado"⁶⁹, in which it was stated the necessity to harness the paper of the universities like social agents in the development and to establish strategies capable an active solidarity in the conformation of a righter and participative society. The implantation and strengthening of a structured teaching leading to a socially committed education, the promotion and fostering of lines of investigation on social activism, the impulse of advocacy campaigns or the establishment of cooperation for development structures were suggested as essential tools in the programming and achieving of these objectives.

⁶⁶ This annex has been elaborated from institutional documentation at UOC Cooperation written by Ismael Peña, Hanne Engelstad and Yolanda Franco, the core team at UOC Cooperation. Specific authorship of figures will be detailed when convenient.

⁶⁷ <http://www.uoc.edu/cooperation>.

⁶⁸ <http://www.uoc.edu>.

⁶⁹ University, social commitment and volunteering.

The University has before himself a new challenge, to provide the society with competent professionals but that in addition, equipped with values that allow them to contribute to a better society. In this sense many universities include in their strategic plans and their organizational charts goals, directed actions and services to promote and to sensitize on subjects like cooperation to the development, volunteering, sustainable development and environmental issues, etc.

Thus, throughout these years the universities have been equipped with diverse cooperation for development structures, which respond to their idiosyncrasy – institutional structures, university centers, chairs, foundations, etc. – by means of which they sensitize their university community and network with other agents of cooperation: nonprofits and charities, nongovernmental organizations, public administrations, etc.

7.2. The model of the Universitat Oberta de Catalunya

The UOC has decided on an institutional structure, fully integrated within the organizational framework of the University and under the command of the Vice-presidency on Institutional Affairs and Cultural Policy, indicating a clear and differentiating commitment of the policy of the University towards development and cooperation. UOC's cooperation area team works supported by the different professionals who conform the managerial and academic groups of the University and by the volunteers of University community.

The special characteristics of the UOC, a virtual university, with an adult and professional student profile, and professionals working per processes, have determined the vision and the mission of their program of cooperation for development, making of the cooperation a cross-sectional activity in all the institution.

7.3. Mission

UOC Cooperation has the commitment to bring people and institutions working for development the expertise of the UOC, contributing with their knowledge, technology, know how and the voluntary work of the members of their community.

Its main goals are:

- To impel initiatives of virtual training on and to the service of cooperation
- To promote networking within cooperation organizations and projects
- To foment the values of solidarity, specially amongst the University community
- To impel university virtual volunteering
- To harness the use of Information and Communication Technologies (ICT) as development tools

In order to achieve his objectives it establishes the following lines of activity:

7.3.1. [Online Learning](#)

- It extends UOC's educational supply in cooperation for development
- It trains NGOs online, in the application of ICTs and online training
- It impels and it supports e-learning for development projects

7.3.2. [Technological transference and of knowledge](#)

It provides organizations and projects a space in the Virtual Campus of the UOC, as well as the assessment and capacitation for its use

7.3.3. [Volunteering](#)

- It coordinates the Online Volunteering program of the University

7.3.4. [Advocacy](#)

- It carries out and supports advocacy campaigns and actions

7.3.5. [Diffusion and research](#)

- It promotes the diffusion of the knowledge in the use of the ICT as development tools

7.4. Activity⁷⁰

With the vision that Information and Communication Technologies are an opportunity for development and cooperation to the development, the UOC Cooperation activity is based on the transference of technology and knowledge from the University to the institutions, initiatives and projects of development.

The technology transference is materialized in the granting NGOs, nonprofits and other projects working in the field of development and cooperation for development of an NGO Campus, a space within the Virtual Campus of the UOC. The participation in this program, allows them:

⁷⁰ In the next two subsections within this section we will detail a little bit more both Online Training and Online Volunteering programs at UOC Cooperation as they are closely linked. There is further information on NGO Campus, academic activities, advocacy campaigns, research, etc. at UOC Cooperation site: <http://www.uoc.edu/cooperation>.

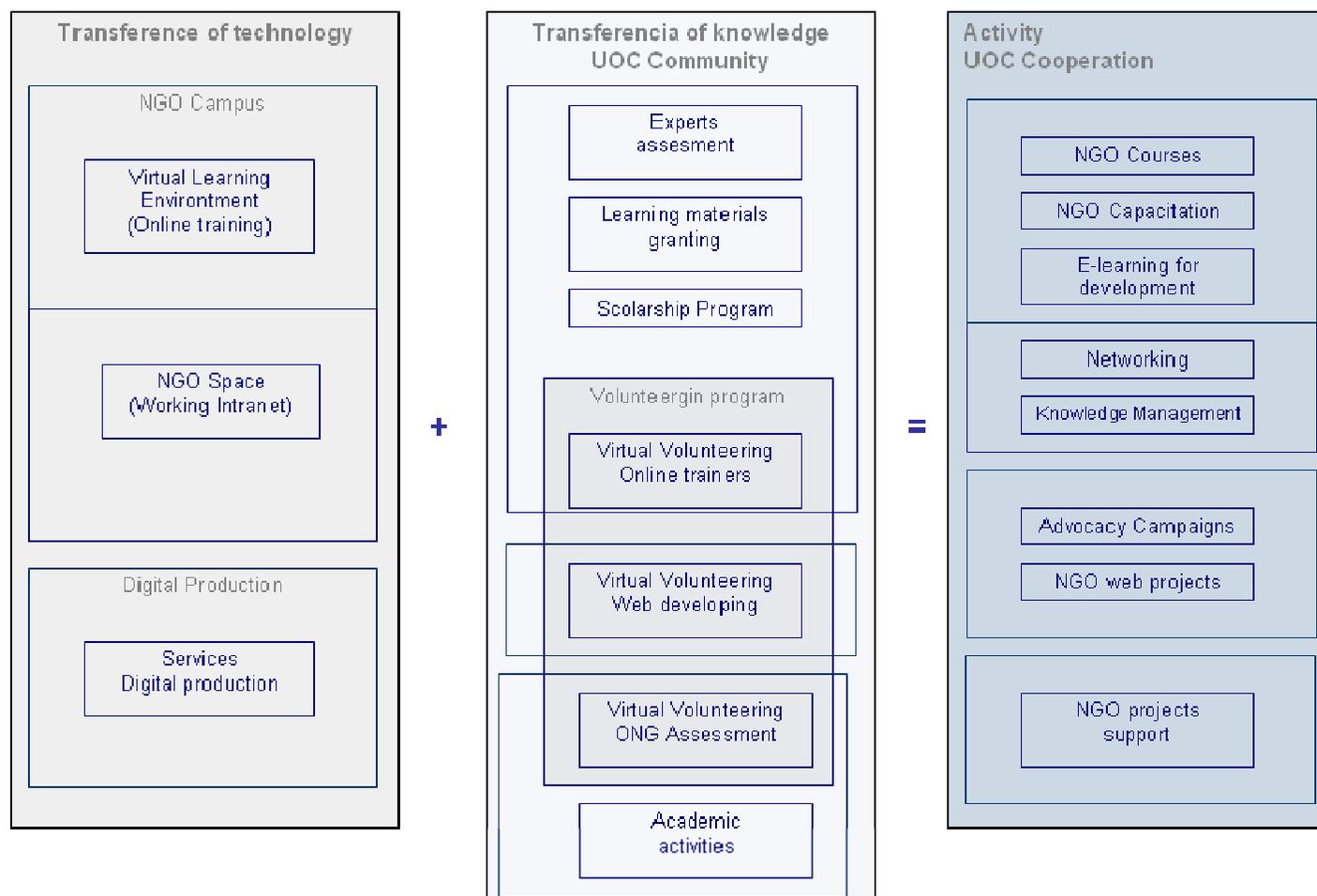


Figure 2: Transference of knowledge and technology for nonprofits at UOC Cooperation
(Elaborated by: Yolanda Franco)

- To integrate themselves in the University Community and to enjoy its services and advantages
- To have Virtual Learning Environments (VLE) to develop online training
- To receive training and assessment on the structure and the requirements of the courses
- To work in network, thanks to an Intranet, an NGO own workspace within the Virtual Campus
- To collaborate with the Volunteering program and to participate in the academic activity
- To enjoy the capacitation supply for ONG developed by the University online volunteers team or by the academic area of the University
- To benefit from UOC Cooperation scholarships program

The technological transference is the basis that eases knowledge transference. The University know how is not only in the explicit knowledge (learning materials, pedagogical methodology), but, and fundamentally, in the people who integrate their university community. This transference is materialized then by means of the cession of didactic materials, the assessment of experts, the scholarships program, the academic activities and the Online Volunteering program. A simple scheme can be viewed in Figure 2.

7.4.1. [Online Training](#)

e-Learning for development and cooperation for development

The institutions that work in cooperation for development and solidarity, due to their special characteristics, can find in online training a great enhancer of their activity, be it for their corporate training, for advocacy projects or intended to capacitation for development.

Online training allows them, in addition to learning without boundaries of time or space, the reduction of infrastructure and commuting or travel costs, as well as economies of scale. All this aspects can make just possible taking part in training actions to people that, otherwise, would be excluded from any kind of training, making possible too a sustainable training in the medium or long run for a great number of target people. This is especially interesting for rural communities and humanitarian aid organizations with a huge network of headquarters, offices and displaced people.

On the other hand, the flexibility of the online formative actions facilitates the adaptation of the training programs to the target people and their necessities, favoring the respect to local cultures and problems. In addition, it allows the feedback of the learning process, training trainers that will bring their knowledge into the local community.

UOC pedagogical model to the service of cooperation for development issues

UOC Cooperation coordinates and manages the knowledge generated by the UOC in training matters and brings it to the world of cooperation, development and solidarity, by means of five lines of work:

- **Post degree education.** Official education in the Area of International Cooperation
- **NGO Capacitation.** Training courses addressed to NGO staff and volunteers in the fields of ICT for development and online training
- **Scholarships program.** Scholarships in a large variety of University courses
- **NGO Courses.** NGO run courses in corporate training and advocacy
- **e-Learning for development projects.** The target of this training being the ultimate beneficiaries of development projects

Whereas the Area of International Cooperation is managed by the Post Degree Education department, under the coordination of UOC Cooperation, NGO Capacitation and NGO Courses are a fundamental part of the activity of the cooperation for development program of the University, and are possible thanks to their technological transference program (NGO

Campus) and of Online Volunteering program.

The aim is that organizations can develop within the Virtual Campus of the UOC its own training supply – or NGO Course, corporate training or advocacy on the subjects the NGO is working in – for which they receive assessment and training.

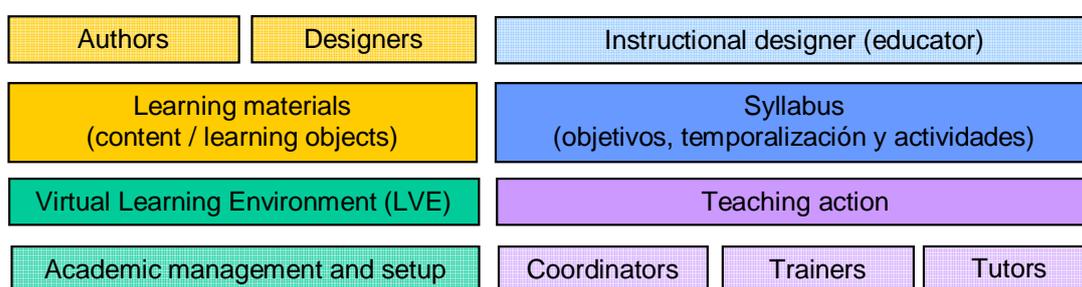


Figure 3: Main UOC's pedagogical methodology components
(adapted and elaborated by: Hanne Engelstad)

The training within this campus is based on UOC's pedagogical methodology (

Figure 3). In this model an online course is built around four axes – virtual learning environment, learning materials, syllabus and teaching action), developed by different agents (managers and administrators of the LVE, authors and designers of the learning materials, instructional designers of the syllabus and coordinators, trainers and tutors of the training action).

With the exception of the setting up and maintenance of the LVE, that is part of the technological transference of the UOC, all other elements are responsibility of the promoting organization of the course, which thanks to the program of NGO Capacitation, receives training, assessment and support in each one of the phases.

Within the program of NGO Capacitation there is a specific training line (Online Trainers Capacitation) that directly deals with core subjects such as UOC's methodological model and online training, from learning in a virtual environment to online training actions design. The coordinators, training and instructional designers of these courses are online volunteers of the University Community. This capacitation is completed with training in the use of ICTs (ICT Capacitation) and the UOC Cooperation scholarships program. Figure 4 is intended to be a synthesis of how the UOC helps NGOs to develop online training.

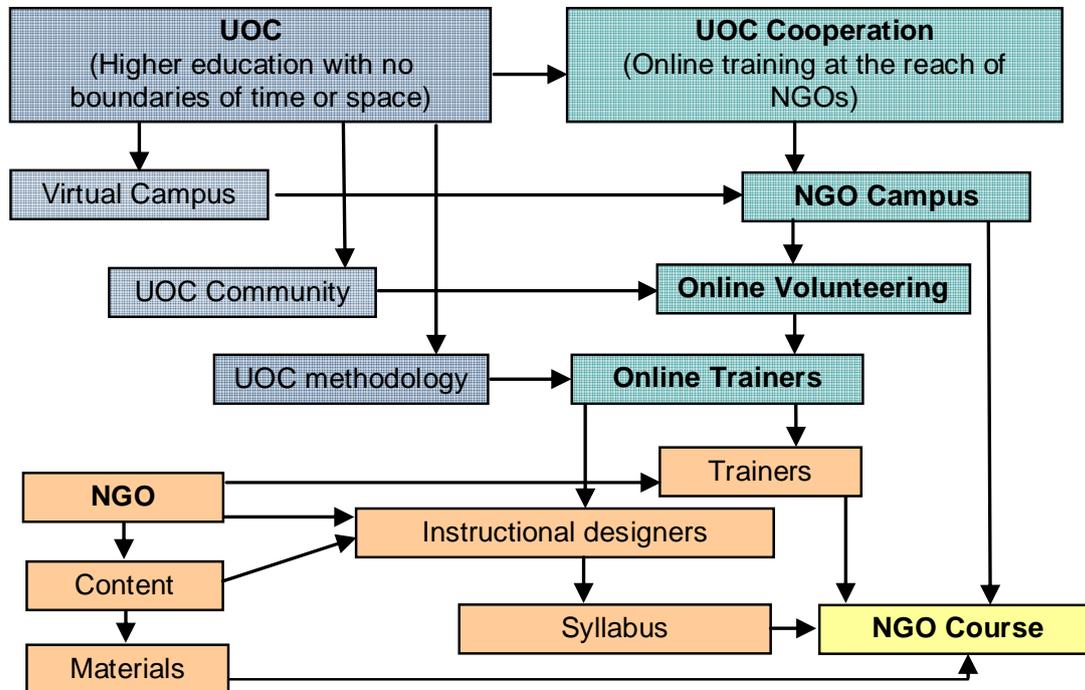


Figure 4: UOC Cooperation workflow with NGOs
 (Elaborated by: Hanne Engelstad)

7.4.2. Online Volunteering Program

Same characteristics that apply to the UOC as a virtual university determine its Volunteering Program, having adopted those same specific characteristics. On one hand, the format of Online Volunteering, and on the other hand, the types of activities and tasks, developed by means of the tools that provide ICTs: online training, multimedia development, formation in line, production multimedia, virtual assessment, etc.

An important part of the mission of the UOC consists in bringing higher education near to people who, for several reasons, are excluded from the traditional university world, people who by familiar or professional obligations cannot commute to a university campus. Through Online Volunteering, UOC Cooperation takes this

mission into the world of cooperation for development.

UOC's online volunteers perform all the roles in an online training project, as stated in both

Figure 3 and Figure 4⁷¹. To do this, online volunteering positions or assignments are designed specifically for these purposes and then published so all the UOC Community can apply for them. As it has been said, the UOC Community is very different to the community of a traditional university: 97% of its students have a professional career, 60% of them have

⁷¹ It is important to note that, as can be seen in Figure 2, online volunteers perform other roles and tasks besides those related to online learning. We will stick, however, to this field for clarity purposes.

already obtained a degree, and most of them are married or live with their mate and have children and/or family commitments such as taking care of elders. It is then very easy to find applicants with top level profiles having both experience and training in the requirements described in the volunteering position. With the sole exception of schedule issues⁷², the quality standards reached by those volunteers in e-learning for development, NGO capacitation and/or NGO courses are really competitive.

⁷² As the volunteer is not paid staff, the responsibilities and commitment he can burden are limited, the number of hours he can bring per week being one of them.

8. Annex 02: Technology

Beginning with technology is an evil thing to do, as it looks like technology is the goal and not the use it is intended to bring the user: education. We would like to put clear that instructional design should lead all other aspects in a learning project, be it online or onsite, and that technology should be chosen to fit the needs of the student, the trainer and the development of the course. Never should the contrary happen.

However, for explanatory reasons, it is far more convenient to start with the places where the educational action will take place, then go to what will be transferred and end with who are the main characters of this training.

The place where to base online training has plenty of names: Learning Management System (LMS), Learning Content Management System (LCMS), Virtual Campus (VC), Virtual Learning Environment (VLE), etc. The last one is maybe the most used one on the side of the teachers, of the pedagogues. All in all, the focal point is *environment*, the habitat where learning activities and virtual teachers and students meet. The first ones are used mainly in technological circles, as the focal point, this time, is *system*. No wonder what the correct or most appropriate name is, we will use all of them as perfect synonyms, paying more attention to LMS, as it is the way these tools are usually labeled in computer science, which is our approach during the next lines.

We will not enter the different conceptions on what e-learning is⁷³ because it is far the goal of this study. We won't enter too whether there is the need or not for a specific tool and what sort of it. The question is that people are demanding

⁷³ Bates (2005).

these tools and this is already happening⁷⁴. As a rough guide we can use some references on how intranets can improve nonprofits communication⁷⁵ (and, thus, knowledge transmission: training and education) or how a constructivist model is best powered by determinate tools⁷⁶, but we will see it extensively in the last section of this Annex.

We will begin with a brief introduction to software licensing just to make some concepts clear. Based on this information, we will go on with the technology itself to run e-learning courses, see what platforms are there, how they work and how they can be used by nonprofits following the rights given by their licenses. Last, we will draw some conclusions on how these tools can improve learning in nonprofits and what should be chose.

8.1. Software licensing

There is plenty of literature why free software should be used, why is it a good option for education⁷⁷ or e-learning⁷⁸ and why for development⁷⁹, progress⁸⁰ and peace⁸¹. And this use implies the whole society in general but also nonprofits⁸² as a main character of its implementation.

We now present some fierce representatives of free software and their licenses:

⁷⁴ Isoph (2004).

⁷⁵ Peña (2001).

⁷⁶ Baumgartner (2005).

⁷⁷ Amatriain (2004), Coppola and Neelley (2004), Tong (2004).

⁷⁸ Arina (2005).

⁷⁹ Nicol (2003), WSIS Executive Secretariat (2003a), WSIS Executive Secretariat (2003b), WSIS Executive Secretariat (2004).

⁸⁰ Gur (2005), Lessig (2004), Gay (2002), Mas (2005).

⁸¹ Zugaldía (2004).

⁸² Murrain (2004).

8.1.1. Free Software Foundation

The Free Software Foundation (FSF) was born in 1985 to protect the rights of free software and to give the user the four kinds of freedom⁸³. This was somewhat difficult in a legal environment ruled by intellectual property rights, so the FSF created a group of licenses to claim its own property rights on the programs licensed with those licenses, but that included special clauses that, in a practical sense, gave away those property rights⁸⁴. The copyright was turned into *copyleft*⁸⁵.

There are several licenses that take into account FSF principles or are compatible with GNU licenses and are classified according to “whether it qualifies as a free software license, whether it is a copyleft license, whether it is compatible with the GNU GPL [...]and whether it causes any particular practical problems”⁸⁶. We will only

mention the most important concerning *only* software⁸⁷, being the last one the only chosen for our purposes on content licensing:

- **The GNU General Public License:** The GNU General Public License is often called the GNU GPL for short; it is used by most GNU programs, and by more than half of all Free Software packages.
- **The GNU Lesser General Public License:** The GNU Lesser General Public License is used by a few (but not all) GNU libraries. This license was formerly called the Library GPL, but we changed the name, because the old name encouraged people to use this license more often than it really ought to be used⁸⁸.

As it is explained in Annex 03 about content, later came the Creative Commons.

8.1.2. Creative Commons

Founded in 2002 by Lawrence Lessig⁸⁹ to provide licenses *à la* GNU for content (books, music, etc.), it has recently incorporated GNU licenses under the whole Creative Commons system of licenses, making of it one of the most comprehensive ones – if not the most comprehensive one.

- **CC-GNU GPL:** The CC-GNU GPL adds the Creative Commons' metadata and Commons Deed to the Free Software Foundation's GNU General Public License. The license is the official FSF GPL, and includes a Portuguese translation.

⁸³ As exposed in Gay (2002):

- Freedom 0: The freedom to run a program, for any purpose.
- Freedom 1: The freedom to study how the program works, and adapt it to your needs. (Access to the source code is a precondition for this.)
- Freedom 2: The freedom to redistribute copies so you can help your neighbor.
- Freedom 3: The freedom to improve the program, and release your improvements to the public, so that the whole community benefits. (Access to the source code is a precondition for this.)

⁸⁴ This is a quite simple explanation of the Free Software Foundation licensing system. For a more accurate one see Gay (2002) and Free Software Foundation (2004). For a simpler – but maybe more direct approach – see Lessig (2004), Nicol (2003) and Mas (2005)

⁸⁵ “Copyleft is a general method for making a program free software and requiring all modified and extended versions of the program to be free software as well” For more information see Free Software Foundation (2001)

⁸⁶ See <http://www.gnu.org/licenses/license-list.html> in Free Software Foundation (2004)

⁸⁷ See Annex 02, section *Content Licensing* for FSF licenses on content.

⁸⁸ Free Software Foundation (2004).

⁸⁹ Please see Annex 02 – Creative Commons Section for a deeper explanation on the Creative Commons history and their licenses.

- **CC-GNU LGPL:** The CC-GNU LGPL adds the Creative Commons' metadata and Commons Deed to the Free Software Foundation's GNU Lesser General Public License. The license is the official FSF LGPL, and includes a Portuguese translation.

8.1.3. Chosen Licenses

We have deliberately passed over the debate of *free software* vs. *open source software*. Excepting the literate debates on the similitudes and differences amongst these two philosophies, most people, users, tend to consider them practically the same, and this is why it is usual to read F/OSS (also FOSS) as the acronym for Free / Open Source Software⁹⁰, FLOSS for Free / Libre Open Source Software, and FLOSSE for Free/Libre Open Source Software for Education⁹¹.

Keeping in mind that there *are* differences between the two philosophies and that sometimes they are not *that* subtle, we will consider both licensing as, in practical terms, the same. We will also, of course, include Creative Commons licenses for software (CC-GNU GPL and CC-GNU LGPL) into the group, as they are not, in fact, different licenses from those from the FSF but the way the Creative Commons can track them and search them on the Internet.

8.2. Free Software Learning Management Systems (LMS)

Again, the people that have written about free software LMSs are much numerous and we can rely on this literature⁹² to benefit from it. We feel the best work until

⁹⁰ International Institute for Educational Planning (2004).

⁹¹ Arina (2005).

⁹² Reynolds (2003), Zondergeld (2004).

now is *Open Source Courseware – Evaluation and Rating*, by Rob Reynolds.

Table 1 shows the main findings by Reynolds. Legend is: S, Scalability; O, Openness, A, Administration; I, Implementation; F, Functionality; E, Effectiveness; TT, Total. And punctuation ranges from 1 to 5, being the Total the sum of all the fields.

We can see that **CHEF** is the top system in terms of Scalability and Development Flexibility, being the following LON-CAPA and Moodle. Concerning Pedagogical Flexibility, **Moodle** is the top system and is followed by LON-CAPA and fle3. This should be enlightening on why Moodle is getting the more and more popular.

This table – in fact, Reynolds's comparative – might be a little bit outdated, as two years is quite a lot of time in network technologies and social software. However, Zondergeld's inventory⁹³ is much more recent but is only Europe centered, not that complete and, notwithstanding, the tendencies shown are similar⁹⁴.

8.3. Conclusions: Suitability of LMS vs. Licensing

There is a great controversy whether FLOSSE is good or not for nonprofits and whether it is good or not in front of proprietary software. Some authors⁹⁵ do still have doubts about the benefits of free software versus proprietary software.

⁹³ Zondergeld (2004).

⁹⁴ Further information on LMSs and LCMSs can be found, respectively, at http://www.elearningworkshops.com/modules.php?name=Web_Links&l_op=viewlink&cid=32 and http://www.elearningworkshops.com/modules.php?name=Web_Links&l_op=viewlink&cid=33 but they only include a brief description and, sometimes, the users' valuation.

⁹⁵ Moyle (2004), InfoDev (2004).

Platform	Technology	S	O	A	I	F	E	TT
Colloquia	Java	3	3	4	3	3	3	19
Coursework*	Java	4	3	5	3	3	3	21
eConf	Java	3	4	4	3	2	3	19
eLedge	Java	3	4	4	4	3	3	21
OpenCourseWare*	Java	4	3	5	3	3	4	22
CHEF	Java	4	5	5	3	3	4	24
ATutor	PHP	3	5	4	4	4	3	22
Claroline	PHP	3	5	5	3	3	3	22
ClassWeb	PHP/Perl	3	4	4	3	2	3	19
eLecture	PHP	2	4	3	3	2	3	17
Moodle	PHP	4	5	4	4	3	3	23
Segue	PHP	4	4	4	4	3	3	22
Fle3	Phyton/Zope	3	5	4	4	2	4	22
KEWL	ASP	3	4	4	3	3	3	20
Bazaar	Perl	3	4	4	3	3	3	20
LON-CAPA	Perl	5	5	4	3	4	3	24
MimerDesk	Perl	3	4	4	3	2	3	19
WeBWork	Perl	3	4	3	3	3	3	19
.LRN	Pcl	4	5	5	3	2	3	22

Table 1: Evaluation of LMS.

Platforms marked with (*) are not distributed under a GPL or open source license, but Reynolds (2003) includes them "as they provide important benchmarks for comparison".

Source: Reynolds (2003). Table: own elaboration.

In fact, most of them *feel* that free software is cheaper than proprietary but that a further study should be carried on Total Costs of Ownership (TOC) as:

- TCOs are location specific;
 - TCOs should be undertaken using real numbers in real circumstances;
 - There is no 'right' number;
 - A low total cost may mean that the technology is not being used to its full advantage;
 - First data is likely to be incomplete or based around rough estimates;
 - First data helps us to focus on what we don't know;
 - TCO work should be repeated at regular intervals;
 - A TCO analysis should lead to more formal record-keeping;
- Data collection over time should become easier and more accurate;
 - Regular TCO analyses are valuable for monitoring and tracking changes over time; and
 - TCOs assist in decision-making where they are based upon commonly agreed benchmarks⁹⁶

It is important to notice that the reverse approach – i.e. is proprietary software cheaper – is not a current debate.

On the other hand, some authors⁹⁷ affirm categorically that free software is far cheaper.

⁹⁶ Moyle (2004).

We agree with some⁹⁸ that the important thing is the tendency of the market and this tendency is to bring social software to the final user. This social software is free software simplified and designed in a way the user can use with no customization or very little customization – if desired, of course. Thus, total cost of ownership seems to drop down when programmers are set aside as customization is not the issue.

Nevertheless, our conclusion is that under a pedagogical point of view, it seems clear that most free software solutions do fit the educational needs, being the proof of it the growing adoption of FLOSSE by universities and higher education organizations.

Regarding costs, there are a growing number of voices in defense of the implementation of free software in the Public Administration. The free software boosting in Brazil by president Lula da Silva and consultant Marcello d'Elia Branco⁹⁹ is maybe the most mediatic of all, and the Spanish project Linex¹⁰⁰ – run by the regional administration of Extremadura to install Linux in all the schools for educational purposes – is a good practice that has been copied everywhere in and outside Spain. Both projects are based on both concepts of freedom as stated by Richard Stallman¹⁰¹: they pursue the freedom in “free speech”, so they can change and adapt their programs, but they also pursue the freedom in “free beer”, as it seems that costs, if well managed, drop down dramatically.

⁹⁷ Gay (2002), Amatriain (2004), Murrain (2004), Mas (2005).

⁹⁸ Downes (2004), Downes (2005), Arina (2005), Wilson (2005a), Wilson (2005b).

⁹⁹ <http://www.softwarelivre.org>.

¹⁰⁰ <http://www.linex.org>.

¹⁰¹ Gay (2002).

9. Annex 03: Content

In between learning management systems – where – and online volunteers for e-learning – who – we find content – what – and, to be more specific, learning objects – how. There are two considerations to keep in mind on content and learning objects when talking about development or cooperation for development.

In one hand, and this is the main goal of this study, we should consider the licensing of these contents and how it can be used for purposes within the framework of development and, indeed, all general purposes not related to commercial issues. There's quite a big consensus that intellectual property rights are a burden for knowledge diffusion in the digital era, a big challenge for educational matters and a thick barrier to developing countries¹⁰².

Following this thread, we will analyze here only those materials that can be used freely for learning purposes, keeping the track of those materials being on the public domain and/or under some specific licenses that allow these uses. First step, then, will be describing what the public domain is and what these licenses are.

¹⁰² For a general, though deep and enlightening overview, see Lessig (2004). More focused on content – rather than intellectual property rights, but following the same philosophy, Creative Commons (2005a), boosted by Lawrence Lessig himself. More related to development and progress, see the short and concise article by Carlos María Correa (2005); same subject, more comprehensive, Nicol (2003).

For a very interesting approach in the field of education, e-learning and learning objects, I suggest the always brilliant George Siemens (2003). Of course, the ideas behind free software usually apply to open source content: see, for example, Free Software Foundation (2004) or Gay (2002)

Second step is how to identify this content having the shape of learning materials. There's the debate whether the Internet itself is the biggest learning objects repository of all. Nevertheless, we believe the learning object should have some minimal structure so it can be called that way. And also, as we are concerned with e-learning, we will point to (e-)learning objects repositories that will give access to a content structured specifically for educational purposes. This decision of defining a learning object structure and pointing to e-learning repositories should, at least, ease the finding of good candidates for e-learning for development purposes.

Notwithstanding, to guarantee these objects as development designed, we will previously outline some categories related to development and solidarity so we can, in the last section, try and match it all studying the suitability of Content vs. Licensing vs. Categorization.

9.1. Content licensing

Here follow three groups of licenses – though the first one is no license at all – that allow nonprofit uses of content¹⁰³. These are the licenses used in this study in order to see the availability of learning objects for e-learning for development projects.

¹⁰³ Of course there are more licenses, but they usually are inspired or have been recognized as similar to those from the Creative Commons, which are by far more popular. Other licenses start with a Creative Commons and then add other restrictions such as “only for inside campus use” – as the ones used by the University of British Columbia. In the end, in the praxis, they all end by converging in similar user rights.

9.1.1. Public Domain

“The public domain comprises the body of knowledge and innovation (especially creative works such as writing, art, music, and inventions) in relation to which no person or other legal entity can establish or maintain proprietary interests”¹⁰⁴. Say, it is content, information, data, knowledge that is free to use, in all the senses of the word.

Thus, all learning objects under the Public Domain will be a good candidate to development projects. Of course there's always the possibility of paying for content, and nonprofits do spend in training¹⁰⁵ important amounts of money, but the question is more a political or an ideological one¹⁰⁶.

It is important to note, also, that the Public Domain is *in no sense any kind of license* or holds any kind of (intellectual) property right. The Public Domain, the Public Commons, belongs to the community, to the whole humankind.

9.1.2. Free Software Foundation Content Licenses

As it was seen in Annex 02, section *Software Licensing*, the FSF released a set of licenses to copyright – and copyleft – free software programs. The problem concerning these licenses was that it only covered code and was not suitable for content, i.e. software handbooks, manuals and other documentation. The solution came by releasing

- The **GNU Free Documentation License**: The GNU Free Documentation License is a form of copyleft intended for use on a manual, textbook or other document to assure everyone the

effective freedom to copy and redistribute it, with or without modifications, either commercially or noncommercially¹⁰⁷.

Although this last kind of license is used mainly on software documentation, manuals and handbooks, it has been used also in other types of content not specifically related to software, especially before 2002, when first Creative Commons Licenses were born.

9.1.3. Creative Commons

Founded in 2001 and boosted by Lawrence Lessig, professor of Law at Stanford Law School, “as a response to the increasing control effected through law and technology”¹⁰⁸, its main commitment is the releasing of a set of copyright licenses so content under these licenses can be released for free for certain uses – usually noncommercial, but not necessarily.

Main licenses are, as explained in their website¹⁰⁹:

- **Standard licenses** are a way to have a copyright but keeping some right for yourself, paying attention to the following aspects:
 - **Attribution**: You let others copy, distribute, display, and perform your copyrighted work — and derivative works based upon it — but only if they give you credit.
 - **Noncommercial**: You let others copy, distribute, display, and perform your work — and derivative works based upon it — but for noncommercial purposes only.

¹⁰⁴ http://en.wikipedia.org/wiki/Public_domain.

¹⁰⁵ CONGDE (2005).

¹⁰⁶ See note 102.

¹⁰⁷ Free Software Foundation (2004).

¹⁰⁸ Lessig (2004).

¹⁰⁹ Creative Commons (2005b).

- **No Derivative Works:** You let others copy, distribute, display, and perform only verbatim copies of your work, not derivative works based upon it.
- **Share Alike:** You allow others to distribute derivative works only under a license identical to the license that governs your work.
- **Public Domain:** instead of licensing, dedicate the creative work to the public domain
- **Developing Nations:** The Developing Nations license allows you to invite a wide range of royalty-free uses of your work in developing nations while retaining your full copyright in the developed world.
- **Sampling** licenses let you invite other people to use a part of your work and make it new
 - **Sampling:** People can take and transform pieces of your work for any purpose other than advertising, which is prohibited. Copying and distribution of the entire work is also prohibited.
 - **Sampling Plus:** People can take and transform pieces of your work for any purpose other than advertising, which is prohibited. Noncommercial copying and distribution (like file-sharing) of the entire work are also allowed. Hence, "plus".
 - **Noncommercial Sampling Plus:** People can take and transform pieces of your work for noncommercial purposes only. Noncommercial copying and distribution (like file-sharing) of the entire work are also allowed.
- **Founder's Copyright:** relevant under the US History of Copyright, this license brings you back to 1970 and sets a copyright the way "The Framers of the U.S. Constitution understood" it: 14 years plus 14 years renewal
- **Share Music:** same as standard, but for music

9.1.4. [Chosen Licenses](#)

Regarding these definitions, we will focus on the following types of content:

On one hand, content that is in the Public Domain. On the other hand, we will group under the same concept (Copyleft) the GNU Free Documentation License, learning objects under GPL Licenses, Creative Commons Standard Licenses and the Developing Nations license. We know the concept is not strictly correct but, concerning only the *use* of the content, it is practically the same and it eases both the analysis and the reading of the results.

In some cases, the institutions have build up licenses similar to those of Creative Commons with Attribution, Non Commercial, Share Alike and Non Derivative features. We also include this kind of licenses within the previous group.

By the way, open access to the repositories and/or their content is a *sine qua non* prerequisite that will not even figure amongst the criteria but that is a must.

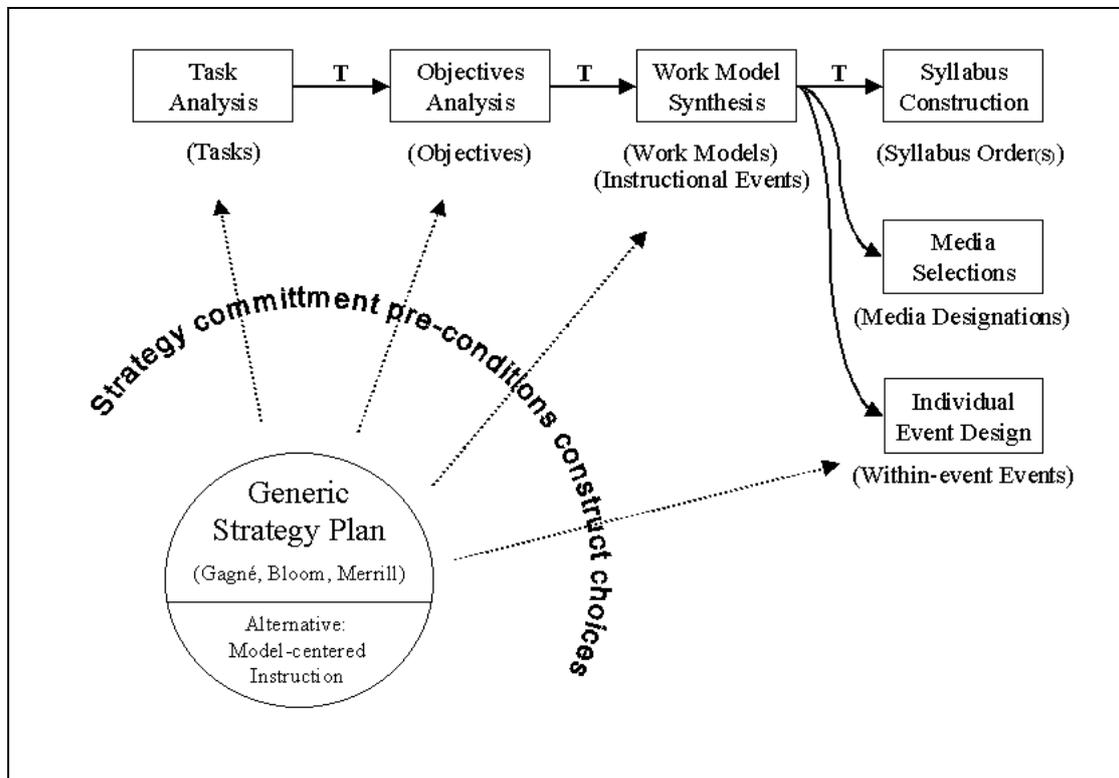


Figure 5: Generation of instructional design constructs within the abstract side of the design space – showing the preconditioning of constructs by instructional assumptions, in Gibbons (2000)

9.2. Learning object structure

It is really difficult to find out a consensus on what a learning object is. And though there are good efforts on trying and summarize it¹¹⁰ even the most comprehensive¹¹¹ ones just do not give a single definition nor a structure.

We'll present the following critical points to decide whether the object is a learning one, roughly based on Figure 5 taken from Gibbons (2000):

- There is a clear, concise, perfectly delimited **subject** and **content** to be trained. A syllabus defining its content not a must but could help. Goals to be reached by people following the material should be included.
- There is a clear **target** of people for this training material

¹¹⁰ See Wiley (2000a) for a good summary of tendencies.

¹¹¹ Wiley (2000b).

- There is a concrete **syllabus**: learning path, schedule, (self)**evaluation** issues, **activities**, etc. that help content be delivered along the course¹¹²
- it is specially designed for **online learning**¹¹³

3. last, a final search was done to find independent sites out of the usual circles of action of nonprofits and e-trainers

Now follow the chosen repositories, the name of the promoter of the repository, its World Wide Web address (URL), the PageRank (PR) and the number of learning objects (#OBJ):

9.2.1. [Chosen Criteria](#)

Criteria to evaluate learning objects will be as follows: subject/content, target, syllabus, evaluation, activities and e-learning.

These criteria might seem really simple, but they do exclude, by construction, all reports, articles, studies, best practices and similar documents about development that do not have a clear educational purpose.

9.3. Main Learning Objects Repositories

The learning objects repositories (LOR) have been chosen following three ways:

1. first one is finding legitimated learning objects directories and see what sites point at the main specialists in the field
2. nevertheless, to avoid the risk of gathering scholar LORs only, the scope of the search was extended to development, cooperation for development and nonprofit focused portals

¹¹² I would like to thank Cristina Steegmann, Maria Carmen Mias and Roxana De La Torre for their comments on this issue.

¹¹³ We won't be hard on this issue and, sometimes, a digital version of the "object" might be enough to consider it a learning object, though this criterion is a quite too much unrestrictive one.

REPOSITORY	PROMOTER	URL	PR	#OBJ
Aduni	ArsDigita University	http://aduni.org/courses/	5	13
AESharenet	AESharenet	http://www.aesharenet.com.au/	6	21875
Apple Learning Exchange	Apple	http://ali.apple.com/	9	280
Ariadne Repository	U. Leuven	http://ariadne.cs.kuleuven.ac.be/silo2004/	NA	134
Berklee Shares	U. Berklee	http://www.berkleeshares.com/	7	101
Careo	U. Calgary	http://careo.netera.ca/	6	4122
Civicus	Civicus	http://www.civicus.org/new/content/civitoolkits2.htm	7	32
CLOE	University of Waterloo	http://pilot.uwaterloo.ca:8080/CLOE	5	NA
Connexions	Connexions	http://cnx.rice.edu	7	2457
Content Bank	The Children's Partnership	http://www.contentbank.org	6	0
Development Gateway	Development Gateway Foundation	http://home.developmentgateway.org/	6	0
Digital Divide Network	Center for Media & Community at the Education Development Center	http://www.digitaldividenetwork.org/	7	0
Dlorn	Stephen Downes	http://www.downes.ca/cgi-bin/dlorn/dlorn	5	NA
Dutch acad. res. results	SURF Foundation	http://www.darenet.nl/en/page/language.view/home	0	40.000
Edna	Educational Network Australia	http://www.edna.edu.au/edna/go/pid/119	7	NA
Education Reform Portal	National Inst. for Community Innovat.	http://www.edreform.net/	5	NA
EduResources Portal	Eastern Oregon University	http://sage.eou.edu/SPT/	5	296
Edutech Mauritius	Edutech Mauritius	http://www.edutech.mu/	5	4
Eldis	Eldis	http://www.eldis.org	7	0
EOE Java Applet Library	EOE Foundation	http://www.eoe.org/FMPPro?-db=Categories.fp3&-token=library&-format=/library/JavaApplets.htm&class=Branch&-max=all&-find	0	3312

Table 2: Learning Objects Repositories (I)

REPOSITORY	PROMOTER	URL	PR	#OBJ
ESCOT Component Catalogue	National Science Foundation	http://www.escot.org/resources/components/overview.html	5	NA
Ethiopian Teacher Education Portal	AED/BESO Project	http://www.tei.edu.et/	5	0
Fathom Archive	Fathom Knowledge Network	http://www.fathom.com	7	NA
Free-Ed	Free-Ed.net	http://www.free-ed.net	6	NA
GFC Global Learning	GCG Global Learning	http://www.gcflearnfree.org	5	NA
Gutenberg Project	Gutenberg Project	http://www.gutenberg.org/	8	0
ICONEX	University of Hull	http://www.iconex.hull.ac.uk/interactivity.htm	6	79
ICT4D.ph	Dept. of Science and technology of Phillipines and the IDRC of Canada	http://www.ict4d.ph	3	NA
ICTdev Library	Commonwealth Telecom Organisation	http://www.ictdevlibrary.org/index.php	5	0
ICTlogy	Ismael Peña	http://courses.ictlogy.net	5	1
InfoDev	The infoDev Program	http://www.infodev.org	7	0
Isoph Institute	Isoph	http://www.isophinstitute.com	0	NA
ItrainOnline's Training Kit	Itrain Online	http://www.itrainonline.org/itrainonline/mmtk/	7	NA
JORUM (JISC)	oint Information Systems Committee	http://www.jorum.ac.uk/	7	NA
Knowledge Mgmt for Dev.	Bellanet	http://www.km4dev.org/	5	NA
La Brecha Digital	El Portal de la Brecha Digital	http://labrechadigital.org/	5	0
Learning About Learning Objects	Learning About Learning Objects	http://www.learning-objects.net/modules.php?name=Web_Links	4	NA
Lydia Global Repository	Lydia	http://www.lydialearn.com/	5	NA
Maricopa Learn. Exchange	Maricopa	http://www.mcli.dist.maricopa.edu/mlx/	6	1215
Merlot	Merlot	http://www.merlot.org	7	12637

Table 3: Learning Objects Repositories (II)

REPOSITORY	PROMOTER	URL	PR	#OBJ
MIT Dspace	MIT	https://hpds1.mit.edu/index.jsp	NA	NA
MIT OpenCourseWare	MIT	http://ocw.mit.edu/index.html	8	NA
NLN Learning Materials	National Learning Network / Becta	http://www.nln.ac.uk/Materials/default.asp	7	NA
NSDL	National Science Digital Library	http://nsdl.org/	8	449
OAISTER	University of Michigan Digital Library Production Service	http://oaister.umdl.umich.edu/o/oaister/	8	5,482,333
Online Free Courses infor.	78 Degreess	http://78.degreess.com/	NA	NA
Peoi	Peoi	http://www.peoi.org/Courses/Coursesen/coursesframe.html	4	150
Physics Textbooks	Benjamin Crowell	http://www.lightandmatter.com/area1book1.html	7	10
Resource Discovery Net.	Resource Discovery Network	http://www.rdn.ac.uk/	8	NA
Schoolnet Africa	Schoolnet Africa	http://www.schoolnet africa.net/index.php?id=1417	6	NA
SciQ	SciQ	http://www.sciq.ca/	6	NA
SMETE Repository directory Math/Science	SMETE Open Federation	http://www.smete.org/	6	13263
South African Curriculum	Wikimedia	http://en.wikibooks.org/wiki/South_African_Curriculum	4	NA
SPLASH	Simon Fraser University	http://www.edusplash.net/	5	NA
Techsoup	Compumentor	http://www.techsoup.org	7	NA
The Commonwealth of Learning LOR	Commonwealth of e-Learning	http://www.col.org/lor/	5	NA
The Golden Swamp Subject Sampler	Goldenswamp	http://www.edclicks.com/	5	NA
The Learning Matrix	The Learning Matrix	http://thelearningmatrix.enc.org/	4	NA
TrainingPoint	CompassPoint Nonprofit Services	http://www.trainingpoint.org	6	138
University of Arizona - Searchable Video Library	University of Arizona	http://www.vala.arizona.edu/vss-bin/vss_SR/torpey/search	5	NA

Table 4: Learning Objects Repositories (III)

REPOSITORY	PROMOTER	URL	PR	#OBJ
University of California eScholarship Repository	University of California	http://repositories.cdlib.org/escholarship/	8	7452
University of Winnsconsin at Milwaukee	University of Winnsconsin at Milwaukee	http://www.uwm.edu/Dept/CIE/AOP/LO_collections.html	5	0
UOC Cooperació	Universitat Oberta de Catalunya	http://www.uoc.edu/cooperation		NA
VCILT	University of Mauritius	http://vcampus.uom.ac.mu/lor/index.php?menu=1	3	476
Virtual Training Suite	Resource Discovery Network	http://www.vts.rdn.ac.uk/	7	0
WebJunction	OCLC Online Computer Library Center	http://www.webjunction.org	NA	NA
World Lecture Hall	University of Texas at Austin	http://web.austin.utexas.edu/wlh/	8	NA

Table 5: Learning Objects Repositories (and IV)

The site Land-Grant Training Alliance Online Lessons (<http://www.lgta.org/>) would have been a good candidate in the category of Diverse content. It had PR 6 and 27 materials. Nevertheless, we discarded the site because of the announce made at its home page: "Please note. This is site is no longer actively supported and will be retired on May 1, 2005"

As it can be seen in Table 2, Table 3, Table 4 and Table 5, two criteria were added besides the former considerations presented so far about licenses and the structure of learning objects.

First one deals with the **PageRank**¹¹⁴ of the site. The reason to include this index was to have some way of valuing the popularity of the page. Of course, there are plenty of indexes¹¹⁵ but this one looked fair enough and, all in all, it was only a matter of having some kind of indication on popularity but, in no way, it was a determinant criterion.

Second one was the **number of learning objects** or entries the database¹¹⁶ had. Although quantity does not necessarily mean quality, a well fed repository is more comprehensive in the subjects it covers and it is easier to find areas uncovered by other repositories.

Both criteria combined, Page Rank and number of objects¹¹⁷, give quite a good way to see if the page is visited and, thus, useful to the external user and susceptible to have good content in it.

¹¹⁴ “PageRank relies on the uniquely democratic nature of the web by using its vast link structure as an indicator of an individual page’s value [...] Important, high-quality sites receive a higher PageRank” Google (2005).

¹¹⁵ Alexa might have been another good candidate, but it has with no doubt a bigger bias due to the criteria it takes into account when valuing a site, especially when considering pages that are popular only in a determinate circle of activity and not within the whole World Wide Web framework.

¹¹⁶ Some pages did not run a database but plain html files. This is, indeed, an implicit way of knowing the amount of content the site manages, its rotation, its degree of actualization, etc. i.e. a site with 1,000 entries and growing at 100 entries per month just cannot be managed by editing plain html files. On the other hand, a site with a dozen resources, unchanged during last year, does not need dynamic web pages build upon database queries.

¹¹⁷ This becomes even more important when objects or resources are uploaded by users.

9.4. (Cooperation for) development content categories

The Creditor Reporting System code (CRS code¹¹⁸) is a categorization system designed by the Development Co-operation Directorate of the Organisation for Economic Co-operation and Development (OCDE). As they are extensively used to justify grants and financial aid given by the OCDE, these codes have become a *de facto* standard and are recognized all over the world.

The CRS code is a five digit codification and is linked to the three digit codification of the Table DAC 5 or Official Bilateral Commitments (or Gross Disbursements) by Sector of the OCDE. As this one is simpler and includes or groups five digit codes into more generic categories, this is the one that will be used to classify contents or learning materials that are aimed to help people working for development and cooperation for development nonprofits.

As the table is really complete in the potential fields of development it covers, only the ones really related to cooperation for development will be taken into account. For example, content related to explaining and understanding how a financial system works can clearly be used in developing countries as per the reinforcement of the local financial system. Notwithstanding, it is too generic, too basic to be considered DAC 5 code #240 even if it should fit in it. Thus, all strictly academic approaches will be discarded.

¹¹⁸ OCDE (2004).

DAC 5 CODE	DESCRIPTION
110	EDUCATION
111	Education, level unspecified
112	Basic education
113	Secondary education
114	Post-secondary education
120	HEALTH
121	Health, general
122	Basic health
130	POPULATION POLICIES/PROGRAMMES AND REPRODUCTIVE HEALTH
140	WATER SUPPLY AND SANITATION
150	GOVERNMENT AND CIVIL SOCIETY
160	OTHER SOCIAL INFRASTRUCTURE AND SERVICES
210	TRANSPORT AND STORAGE
220	COMMUNICATIONS
230	ENERGY GENERATION AND SUPPLY
240	BANKING AND FINANCIAL SERVICES
250	BUSINESS AND OTHER SERVICES
311	AGRICULTURE
312	FORESTRY
313	FISHING
321	INDUSTRY
322	MINERAL RESOURCES AND MINING
323	CONSTRUCTION
331	TRADE POLICY AND REGULATIONS
332	TOURISM
400	MULTISECTOR/CROSS-CUTTING
410	General environmental protection
420	Women in development
430	Other multisector
500	COMMODITY AID AND GENERAL PROGRAMME ASSISTANCE
510	General budget support
520	Developmental food aid/Food security assistance
530	Other commodity assistance
600	ACTION RELATING TO DEBT
700	EMERGENCY ASSISTANCE AND RECONSTRUCTION
710	Emergency food aid
720	Other emergency and distress relief
730	Reconstruction relief
910	ADMINISTRATIVE COSTS OF DONORS
920	SUPPORT TO NON-GOVERNMENTAL ORGANISATIONS
998	UNALLOCATED / UNSPECIFIED

Table 6: DAC 5 Codes.

Source Organisation for Economic Co-operation and Development (2004)

By understanding what was said in the introduction about what were the axial reasons for on-line learning in cooperation for development projects and organizations (training of the cooperation for development

agents, advocacy and capacitation for development) the previous example can be translated into a proper one – directly concerning development – by just including the name of a country figuring in the bottom

of the HDI and/or the best practices associated with this policy.

Special attention will be paid to code #920 as it is the one that covers all nonprofits capacity building issues.

9.5. Conclusions: Suitability of Content vs. Licensing vs. Categorization

9.5.1. Data

As it is seen in Table 9, Table 10 and Table 11, the categorization has been grouped under four concepts:

- **Development:** repositories with subjects mainly related to those of Table 6
- **Diverse:** subject of diverse thematic, usually popular diffusion of science
- **Scholar:** mainly subjects closely related to higher education or with a deep specialization in one scientific field
- **Nonprofits:** amongst subjects mainly related to those of Table 6, those with a focus on code #920 and/or nonprofits empowerment and/or nonprofits capacity building

Content	# of sites	% of sites
Development	14	20.90%
Diverse	15	22.39%
Scholar	33	49.25%
Nonprofits	5	7.46%
Total	67	100.00%

Table 7: Sites per category.

The reasons not to follow rigorously the codification in Table 6 as originally intended are obvious by looking at Table 7 and Table 11: just 22.39% of sites are related to Development issues, a number that drops to 8.96% if we just consider the ones containing learning objects. Of those, 40.00% did not contain more than links¹¹⁹,

so the *real* number of Development focused sites with learning objects is a poor 4.48%

¹¹⁹ We recognize the effort of concentration done by some portals as, most times, link aggregation is the only way for sites containing little information to be indexed properly. Nevertheless, being careful about concepts, this is not exactly a content repository or a learning objects repository. On the other hand, we can count more than one time the same learning object if linked instead of directly hosted. Our criterion was clear: learning objects *hosted* by learning objects repositories. The reason is also clear: **we'd like to know whether it is easy to access learning objects in concrete places**

instead of having to search for them through the internet.

Content	# of sites	% of total sites
Development	3	4.48%
Diverse	12	17.91%
Scholar	27	40.30%
Nonprofits	4	5.97%
Total	46	68.66%

Table 8: Sites offering Learning Objects hosted within

Nonprofits category does not look better. Only five sites¹²⁰ showed nonprofit focused content. One of the sites, as happened with Development category, was but links to other sites. The remaining sites implied a 5.97% of the total and summed up 43 courses¹²¹, 32 of those offered by one site alone.

We can say that, exceptuating scholar sites and generic sites, only a 10.45% offered content related to development or cooperation for development. But if, instead of looking at the number of sites we look at the number of learning objects, we find that its easy to count the courses on Nonprofits (43) but the total count of learning objects on development is not available for all of the three sites that offer this content directly. A first glance suggests that the magnitude of the whole amount of learning objects in both categories Nonprofits and Development is under the first hundred. The total number considering all categories

is far up the one hundred thousand learning objects¹²².

¹²⁰ In fact, other sites appeared during the research, but they offered on demand courses at a determinate cost or standard courses at a determinate fee, which is not the field of our research, that is learning objects.

¹²¹ One of these sites offered a mix of free and paid courses. As paid courses where closed, same as explained in note 120 applies. As per open courses, although the possibility of following a self paced course is not exactly a learning object, those objects could be in some way be used for other purposes, so we will consider these courses as access to learning objects.

¹²² The number is no doubt far bigger as a lot of the repositories did not show the total number of resources hosted within and counting them on the screen was just impossible because of its volume.

Content	NO	YES	Total
Development	9	5	14
Diverse	2	13	15
Scholar	1	32	33
Nonprofits	1	4	5
Total	13	54	67

Table 9: Number of sites hosting Learning Objects per category

YES: they host learning objects
 NO: they host other material such as articles, reports, etc

Content	NO	YES	Total
Development	64.29%	35.71%	100.00%
Diverse	13.33%	86.67%	100.00%
Scholar	3.03%	96.97%	100.00%
Nonprofits	20.00%	80.00%	100.00%
Total	19.40%	80.60%	100.00%

Table 10: % of sites hosting Learning Objects per category

YES: they host learning objects
 NO: they host other material such as articles, reports, etc.
 Value is % in relationship to the total of the category

Content	NO	YES	Total
Development	13.43%	7.46%	20.90%
Diverse	2.99%	19.40%	22.39%
Scholar	1.49%	47.76%	49.25%
Nonprofits	1.49%	5.97%	7.46%
Total	19.40%	80.60%	100.00%

Table 11: % of sites hosting Learning Objects on the total

YES: they host learning objects
 NO: they host other material such as articles, reports, etc.
 Value is % in relationship to the total of all categories

9.5.2. [Some other conclusions](#)

Summarizing, we can conclude that, at this moment, **the best option to have e-learning on development and/or cooperation for development, is go to the market and choose among the two main options: enroll in a course and pay**

its fees, or pay for a customized/ corporate training.

If the option is betting on open content, the scene is desolating: few sites and even less materials. However, we'd like to think that the few ones found in the study are but the seed of a new niche that has just seen the light and that, by copying good practices in

other sectors – being the academic one the most advanced – should be able to bring what in the opinion of some¹²³ is already a need.

¹²³ ISOPH (2004) – which is one of the foundations that produces corporate learning for nonprofits –, Franco (2002), Hawkins (2002), Npower (2004), UNICTTF (2003) and, for Spain only, CONGDE (2005).

10. Annex 04: Online Volunteering

In this annex we develop the Online Volunteering issues. We will start by presenting the object of study under two approaches.

First one concerning the concept of Online Volunteering itself (Taxonomy of Online Volunteering) and second one concerning what these volunteers can do (Typology of Online Volunteering). These first two steps are necessary to agree in what the whole thing is all about. As not all volunteering sites describe online volunteering with the same word, and not always same words mean the same, we will try to point the different names existing and their differences or similitudes. Of course, this is a “chicken or egg” dilemma and theory gets overridden by experience. Thus, although we present first of all the taxonomy, it has been fed by both literature on the subject and volunteering sites analysis.

Same happens with Typology of Online Volunteering. Even we use as starting point Peña (2005), the fact is that we had to wait until the end of the analysis to check out the definitions put there.

After giving a definition of Online Volunteering and the reach of it, we go on presenting the Volunteering Matching Sites of the analysis and the criteria chosen for this analysis. This is really helpful to establish Online Volunteering for e-Learning for (cooperation for) development categories which, all in all, are the ones that will framework the Suitability of Sites vs. Taxonomy vs. Typology last analysis.

10.1. Taxonomy of Online Volunteering

There are different ways to name Online Volunteering and not always these different names are used to describe the same thing.

Online Volunteer: maybe the most standardized term, it deals with volunteers working from home or work or wherever but not in place. An internet connected device is the main communication tool and his main added value is knowledge. He can do things but, over all, he *knows* how to do things. Thus, he’s a good assistant, consultant, advisor, etc. And, of course, he can transfer his knowledge, so he can effectively work as trainer or teacher (e-trainer or e-teacher, of course).

The definition given by the United Nations Volunteers is “[Online Volunteering] means tasks completed, in whole or in part, by a person via the Internet from a home, work, university, cyber cafe or telecenter computer” (UNV, 2004) and it surely is the most spread on and, due to the adoption of the term by the United Nations Volunteers, it has *de facto* become the “official” name.

According to UNV, we could think at Online Volunteers as telecommuters¹²⁴, but Nilles’s definition of telecommuting and teleworking¹²⁵ is quite wider and we’ll go back to it in the next section about the typology of Online Volunteering.

Virtual Volunteer: defined by Ellis and Cravens as “volunteer tasks completed, in whole or in part, via the Internet and a home or work computer” (Ellis & Cravens, 2000) it is a complete synonymous of Online Volunteer, though it was maybe coined before this term during the study run by Impact Online, the Virtual Volunteering Project, back in 1996.

As synonymous of Online Volunteer we can also find **cyber service**, **telementoring** or **teletutoring** (Ellis & Cravens, 2000) but they are scarcely used. **e-Volunteer** is seldom used but it is neither a standard.

¹²⁴ UNV (2004).

¹²⁵ Nilles (1998).

Cybervolunteer: this term uses the prefix cyber- that, if we have to believe the Wikipedia, "is a prefix stemming from cybernetics and loosely meaning through the use of a computer"¹²⁶. It seems, thus, that its meaning should be the same as online volunteer. Nevertheless, there are some placers where cybervolunteers are thought to be ICT Volunteers. We will use it here as a synonymous of online volunteer and, indeed, propose it is used this way.

ICT Volunteer: a person who is working to foster the implementation and use of Information and Communication Technologies. He can install hardware, software or carry on with ICT training programs. There's no need to be an online volunteer to be an ICT volunteer: installing hardware is a good example. And there's no need to be an ICT volunteer to be an online volunteer: teaching a language through a virtual campus is not related with ICT fostering, at least in a direct way.

10.1.1. Proposals and conclusions on the Taxonomy of Online Volunteering

- As a matter of conclusion or as a matter of proposal for further research and analysis, we will adopt the term **Online Volunteer** for our purposes. The results of our study show that this term is a total synonymous of **virtual volunteer** and **e-volunteer**. For these reason, and strictly for esthetic purposes, these synonymous will be used indistinctly along this work, keeping in mind that virtual volunteer seems to be the older one, online volunteer the most official one (as adopted by the UN) and e-volunteer the most recent.

- We propose avoiding the use of both terms **telementor** and **teletutor** as they can be used in environments not related to nonprofits (i.e. the teletutor being the paid tutor in a virtual learning project, telementor being a personal coach within a corporation)
- We strongly suggest avoiding the use of **cybervolunteer** and **cyber service** as, even though they are synonymous, they can lead to misunderstanding because of the use of the term also as a synonymous of ICT volunteer. Instead, we would recommend the use of **online volunteer**, **virtual volunteer** and **e-volunteer**, on one hand, and ICT volunteer on the other hand, to express on-line and on-site volunteering, respectively
- We recommend a proper use or the term **ICT Volunteer**, not a synonym of Online Volunteer

10.2. Typology of Online Volunteering

Staying in the definition or range of Online Volunteering, we've seen there are also different approaches, according to intensiveness or scope of online collaboration and the nature of the tasks run by these volunteers.

We think we can set up the following classification:

- **Online Advocacy:** Online volunteering in advocacy consists in subscribing online campaigns to promote human rights¹²⁷ and, more specifically, to report some human

¹²⁶ <http://en.wikipedia.org/wiki/Cyber>.

¹²⁷ We can extend the field of action to environmental issues, animal rights, etc.

rights violation and, thus, to force some change. Amnesty International Spain campaign against death penalty in Nigeria for women such as Safiya Hussaini¹²⁸ and Amina Lawal¹²⁹ is a very good example of this kind of volunteering where people were called to enter a site¹³⁰ and sign a manifesto against gender discrimination.

However, this kind of volunteering would never be called that way if it took place offline, i.e. if asked to sign for a campaign in the middle of the street, so it is really hard to consider it online volunteering when it happens in the Internet. But this kind of actions are labeled this way on most volunteering sites and are, in fact, the most frequent ones.

On the other hand, the major part of these sites – if not all – include a “send to a friend” option. Understanding advocacy as making people know about a situation or a debate on some issue, we could then think of this “send to a friend” options as a sort of very light online volunteering. Even with a very low level of commitment, (online) volunteering would take place this way.

- **Online Assessment and consultancy:** Some portals include forums where people can ask for help and experts can bring it in exchange for nothing or in exchange for reputation and social recognition¹³¹. Some of these portals are cooperation for development focused or clearly a

service for nonprofits. Most of these forums are not moderated nor directed for anyone: they are just tools at the reach of everyone.

Some NGOs¹³² have started such a service under a coordinate design, where a registered online volunteer is asked for advice and he brings back some kind of helpdesk service in plenty of subjects, usually related to NGO management or development projects management. Let's make clear that it is no proactive but reactive volunteering: the volunteer just brings feedback on questions, never leading any kind of advice on his own initiative. So, there is “little” to “some” level of commitment depending on what happens if the volunteer does not answer the request for help – it usually happens nothing as, being a volunteer, he cannot be punished as a paid worker would.

The *con* part is that, as with the previous type, it is a rather passive approach to online volunteering, not a proactive but a reactive one. The *pro* part is that it builds a network of experts, a knowledge network, which would rarely be found offline. Unlike online advocacy, that can easily go offline and pursue similar or same goals, such a network of

¹²⁸ www.amnistiaporsafiya.org.

¹²⁹ www.amnistiapornigeria.org.

¹³⁰ Both sites now point to <http://www.es.amnesty.org/paises/nigeria/>.

¹³¹ See Himanen (2003), Castells (2002), Papathéodorou (2000), Gay (2002).

¹³² Solucionesong.org (NGO Solutions), the Spanish online community born thanks to some retired enterprise managers that wanted to volunteer (and then enhanced into a portal by Fundación Chandra), is sort of a clearing house of questions and answers where needs (NGOs) and experts (online volunteers) meet. The online volunteer registers, defines his area of expertise and waits for mails to come in with the questions. Answering back or not is up to the volunteer. As there's more than one person by area of expertise, questions rarely remain unanswered. Nabuur.org or Ciudadbipbip.org are virtual communities that have a very similar way of working.

experts, especially if international or covering a wide range of territory and/or expertises, is closely linked to the nature of the Internet itself and would disappear without – or, at least, lose most of its flexibility and immediacy¹³³.

- **Onlined Offline Volunteers or Online volunteers for offline projects:** This is the natural evolution of the last level. It deals with increasing the commitment of the online volunteer and giving her or him a defined role in the development project the NGO is running or in the management of the NGO itself. It can be more comfortably looked at from another standpoint of view: sending the volunteers back home by means of virtualizing their jobs.

It turns helpdesk issues into responsibility: this is *your* duty, this is *your* task. **This modality usually converts offline volunteers into online volunteers:** volunteers that would exist anyway but that ICTs allow them not to travel abroad, not to be there in that precise place or then at that precise moment. It is full volunteering, but kind of a real volunteering virtualization. Most serious online volunteering programs work this way. This concept really fits with Jack Nilles concept of telecommuting: “moving the work to the workers instead of moving the workers to work; periodic work out of the principal office, one or more days per week either at home or in a telework center. The emphasis here is on *reduction or elimination of the daily*

commute to and from the workplace”¹³⁴.

- **Pure Online Volunteers or Online Volunteers teams for online projects:** But why virtualize when the Network could exist by itself? Why not think directly in online volunteers teams instead of thinking how to virtualize them? Why not think in *fully online* development projects instead of its online side?

Pure Online Volunteers – pure in the sense of they being born thanks to the Internet not of being purer than other types – have their prime example in the Free Software / Open Source Software community¹³⁵ (F/OSS) and we can think of them as the natural enhancement of both type II (online assessment volunteers) and type III (onlined offline volunteers). In the first case, naturally born online volunteers come and get more and more responsibilities and end up by leading projects on themselves whose nature is closely linked to this of the Internet (i.e. information and communication). Second case is the enhancement of onsite volunteers not by means of responsibilities, but of the nature of their collaboration, the nature of the means they use to volunteer.

Summing up, this can be portrayed as shown in Table 12:

¹³³ Think of running the network by telephone or *snail mail*.

¹³⁴ Nilles (1998), italics in the original.

¹³⁵ Himanen (2003).

	Reactive	Proactive
Telecommuting	Type I: Online Advocacy	Type III: Onlined Offline Volunteers
Teleworking	Type II: Online Assessment	Type IV: Pure Online Volunteers

Table 12: Types of Online Volunteering

10.2.1. Proposals and conclusions on the Typology of Online Volunteering

- While first and second steps in online volunteering can be a good approach to a newcomer to online cooperation for development, we guess steps three and four should be fostered in order to profit from the full potential of ICT4D and volunteering. As it can be seen in the analysis of the volunteering sites, we've seen very good examples of both, but mainly of the third type. Nevertheless, somehow somewhere a virtual community should rise and lead an exponential growth of the fourth type: the F/OSS community has already done it. The e-educators community – especially when talking about authoring and shared authoring tools – is in the way and there're already new tools that start to make think of a possible and near future of a real virtual community of e-educators (or ICT assisted offline educators). We should think on how to replicate these experiences in the development field¹³⁶.

- It is interesting to think of **the online volunteer as a knowledge manager** whose work is catalyzed and empowered by ICTs. The main tasks of knowledge management¹³⁷ – knowledge audit, creation, localization, organization, storing, sorting, sharing, transferring, informing, training, using, capitalizing – can be performed by online volunteers and/or by the means of ICTs.
- Further research should be focused on the definition of an online volunteer profile, especially under the approach of the knowledge manager. For him to be a good knowledge manager should have a good education/training and/or a deep (professional) expertise in a concrete area. As happens with some online students, online volunteers should be found amongst people that have strong compromises with family and career – cannot volunteer onsite – but can make a difference by using intensively ICTs – are knowledge intensive workers or volunteers. Nonprofits could, then, bring in new talent – excluded from cooperation for development because of family and business compromises – or just stop losing talent for similar

¹³⁶ A good example of this is the V2V (volunteer to volunteer) project by the Brazilian Portal do Voluntário (<http://www.portaldovoluntario.org.br/v2v.php>), but it is quite new and it is yet in his first steps.

¹³⁷ ELIT Learning Innovation (2002).

reasons. Nonprofits could, also, increase noteworthy their human capital and, over all, their capacity, by understanding knowledge as capital and thus capacity.

10.3. Volunteering Matching Sites

10.3.1. Volunteering sites

Following a similar method than the used for Learning Objects Repositories, volunteering matching sites have been chosen following three ways:

1. First one is finding legitimated volunteering directories related to development and cooperation for development. We include within issues such as gender, environment, peace, etc.
2. Indeed, to avoid the risk of gathering only traditional volunteering positions through virtual means, the scope of the search was extended to virtual communities that are, in fact, communities of online volunteers that work for development and cooperation for development
3. Last, a final search was done to find independent sites out of the usual circles of action of nonprofits and volunteering

As in the case of learning objects repositories, also **PageRank**¹³⁸ was added as a criterion for popularity. Other data gathered to reinforce the popularity criterion was the number of total number of volunteering opportunities.

¹³⁸ See notes 114 and 115 and the text they refer to for the philosophy behind this decision.

Entering exclusively into online volunteering, two criteria were used: whether there was a specific **online volunteering section** (OVS) and the total number of online volunteering opportunities. When this online volunteering section was not available, the presence of a search engine was evaluated to see whether it could find specific terms concerning online volunteering¹³⁹ and perform a filter to reduce the number of results.

Last, a rough categorization according to the **four types of online volunteering** as it was stated in Table 7. This should help to see how the volunteering sector and, in concrete, the online volunteering sector, is prepared or has evolved to more complex – and more *pure* – forms of online volunteering.

A complete list of the sites under study can be read in Table 13:

¹³⁹ These terms were online volunteering, online, virtual volunteering, etc. Besides the fact that performing a search was usually a non-existent feature, the results were all but the desired.

VOLUNTEERING SITE	PROMOTER	URL	PR	# POSTS	OV SECT	# OV POSTS
Ciudad Bip-Bip	Fundación Bip-Bip	http://www.ciudadbipbip.org	4	NA	1	NA
Craigslist	Craigslist Inc.	http://www.craigslist.org/	8	NA	0	NA
Global Volunteer Network	Global Volunteer Network	http://www.volunteer.org.nz/	6	NA	0	NA
GoVolunteer	Volunteering Australia	http://www.govolunteer.com.au/	6	9134	0	NA
Hacesfalta.org	Fundación Chandra	http://www.hacesfalta.org	6	849	1	59
Idealist	Idealist	http://www.idealist.org/	8	10076	0	NA
InterConnection	Interconnection	http://www.interconnection.org/	5	NA	1	NA
JustVolunteers	Baou, Inc.	http://www.justvolunteers.org	NA	NA	1	NA
Nabuur	Nabuur	http://www.nabuur.com	6	NA	1	NA
OnlineVolunteering	United Nations	http://www.onlinevolunteering.org	7	146	1	146
ProHumana	Fundación ProHumana	http://www.prohumana.cl	NA	32	1	32
ServeNet	Youth Service America	http://www.servenet.org	6	51943397	1	17
Soluciones ONG	Fundación Chandra	http://www.solucionesong.org	6	869	1	869
Universitat Oberta de Catalunya	Universitat Oberta de Catalunya	http://www.uoc.edu/cooperation	7	NA	1	NA
V2V	Portal do Voluntário	http://www.portaldovoluntario.org.br/	4	807	1	807
Volunteer Abroad	GoAbroad	http://www.volunteerabroad.com/	6	2506	0	NA
Volunteermatch	Volunteermatch	http://www.volunteermatch.org/	7	2121	1	170

Table 13: Volunteering Sites

We have to note that two other – in appearance – powerful sites were evaluated: USA Freedom Corps (<http://www.usafreedomcorps.gov/>) and Network for Good (<http://www.networkforgood.org>). After some navigation we found that the first one linked directly to the second one, and that one used – though with its own template – the database and tools from Volunteermatch. Surprisingly, Volunteermatch has PageRank 7 and both others have 8.

At his turn, Volunteer International (<http://www.volunteerinternational.org>) was also taken off the list because it used Volunteer Abroad tools and data under own template. Volunteer Canada (<http://www.volunteer.ca>) was removed because it did not have volunteering opportunities but linked to volunteering institutions.

10.4. Online Volunteering for e-Learning for (cooperation for) development categories

Although the fields and tasks appearing in Table 14 have been simplified, we think they cover the main duties an online volunteer can carry when collaborating in e-learning for development programs.

Most of the posts screened during the research were evaluated to see if they covered all, some or any of the tasks required to run an e-learning program. Of course, these tasks are closely related to types of online volunteering III and IV where an onlining of the onsite volunteer or a pure online volunteering take place.

Field	Task
Planning	Director
	Coordinator
	Pedagogist/instructor
Teaching	Instructional Designer
	Author
	Tutor
	Online Facilitator
	Evaluator
Managing	Academic Manager
	Digital Content Designer
	Webmaster

Table 14: Online volunteering tasks in e-learning

10.5. Suitability of Sites vs. Taxonomy vs. Typology

10.5.1. [Types of online volunteering matching portals](#)

The first thing to consider is that, even if we have drawn a pretty good list of volunteering sites where some of them offer online volunteering opportunities, they are everything but homogeneous and we could classify them in four very different categories:

- On one hand we find the **traditional volunteering matching services** that have gone online as a means of reaching new volunteers through a new communication channel. But even if

they use the Internet to communicate with others, they still have to understand how it fully works and all its possibilities.

- On the other hand we find portals that do understand the power of online volunteering. They provide a coherent discourse and means of reaching online volunteering opportunities, doing it from the point of view of this new reality that online volunteering and working in the World Wide Web implies. We can find here sites such as VolunteerMatch and, over all, the United Nations OnlineVolunteering Service. We would like to say that

these are the pure **online volunteering matching sites**¹⁴⁰.

- The **online volunteering tanks** are sites constructed as virtual communities where online volunteering takes place. Soluciones ONG, Ciudad Bip-Bip, Nabuur, V2V are places where a pool of experts is gathered and it is brought at the disposal of nonprofits so they can benefit from the knowledge of the people forming the virtual community. It is due to mention that V2V is a virtual community build exclusively by the initiative of the own volunteers. Whilst the other three – and surely many more – are powered and leaded by nonprofits or foundations, Portal do Voluntário just gave away the technology – and maintains the site – but the projects are built within the virtual community and due to popular demand, never leaded by the promoter of the site. V2V is maybe a hybrid of this kind of online volunteering portal and the next one.
- Other sites work as **online volunteering virtual nonprofits** where the portal itself works as a virtual nonprofit. Interconnection or UOC Cooperation recruit online volunteers to run their own projects, though the projects are built and run in an open way and also due to popular demand. The difference with the previous type of portal is that the organizer has a strong commitment with real projects besides the creation of a virtual

community of experts and let them alone to rule themselves.

Thus, we can group the preceding kinds of portals in two very different groups: one group will be conformed by the traditional volunteering matching services and the online volunteering matching sites. They are **matching sites** though they are in different steps in the understanding of the online volunteering evolution. Because of their nature, they usually promote type I (Online Advocacy) and type III (Onlined Offline Volunteers) kinds of online volunteering, being the last more frequent in online volunteering matching sites.

Second group is formed by online volunteering tanks and online volunteering virtual nonprofits. Both are **virtual communities** where not only a matching of online volunteers takes place, but also the running of a project. The difference between them is easy to see if we go back to the four types of online volunteering: online volunteering tanks promote a type II online volunteering (Online Assessment Volunteers) while the online volunteering virtual nonprofits promote a type IV online volunteering (Pure Online Volunteers).

Of course, the lines that divide this classification are not that clear and blur when analyzing one by one the thousands of online volunteering opportunities, but they work quite well when aggregating and having a rough approach.

10.5.2. Online Volunteering for e-Learning for Development

We will go in depth with this concept on Annex 01 about UOC Cooperation, but some conclusions can be made so far.

The first question to mention is that the profiles required for e-Learning (see Table 14) do belong to types III and IV of online volunteering and, thus, will be found in different matching sites.

¹⁴⁰ Even if VolunteerMatch is a volunteering matching site also intended for offline volunteers, it gives online volunteering its own space within the site in a way that it becomes independent from the rest.

The analysis shows that whilst ICTs development (programming, digital literacy, website design, etc.) is a very well known field and can be found in most portals, e-learning tasks are much more difficult to arise. Indeed, only online mentoring is a concept that is easy to be found, and there is a good number of opportunities to conduct online teaching – even we do not know how this online teaching is done and whether it follows a detailed (instructional) design or it is just a self paced course with the help of an online tutor. Nevertheless, it is not strange to find several opportunities to teach online, which makes us optimistic on how this online volunteering projects for teaching can evolve to *real* e-learning with all its pedagogical burden and all the factors necessary to be called that way.

10.5.3. Common errors and types of volunteering

One of the things we wanted to check was the appearance of typical errors on the conception of online volunteering and the mixing/coexistence of the different types of online volunteering.

There is not much more to say after the reflections on section *Types of online volunteering matching portals* about the four types of online volunteering. It can be said that all four types were found but, surprisingly, type I is not as important as we thought in the beginning and it is found mainly in very generic sites – some of them, as Craigslist, not even specialized on volunteering – and fading as the portal becomes aware that online volunteering is of a different nature and more information on this new way of volunteering appears in the site around the matching tool.

Speaking in numbers, types II and III are the most usual.

It is nice to see that, even if the near 30,000 opportunities were not read one by one, the

error of considering ICT volunteers as online volunteers was not found anywhere. So, is an error only found in academic circles or at speeches and conferences, but corrected in the communication media. And this is good news.

A second – we thought – usual error deals with considering online volunteering a category amongst the fields where the volunteer wants to collaborate, i.e. humanitarian aid, environment, health, etc. This is an error that was first detected at JustVolunteers.org and was corrected in the middle of March 2005 after the author hold dialogue with the site webmasters through his own blog¹⁴¹. Nice to see too, the error was not found anywhere else and, when online volunteering was not a yes/no option (usually through a checkbox) it was integrated as a geographical category¹⁴², which is quite obvious.

10.5.4. Conclusions and forecast

We'd like to think that online volunteering has evolved dramatically since the birth of the web¹⁴³ in both ways:

- In its scope, as it now covers a wide range of areas and expertises and, most important, is in its way to create its own place on development and cooperation for development

¹⁴¹ This dialogue can be seen at post <http://www.ictlogy.net/ictlogy/?p=234> and its comments.

¹⁴² Geographical categories usually showed a list of countries where to volunteer and, at the end of the list, it would appear a “anywhere” field, that gave no geographical filter, and followed by a “virtual” field that would filter the results for online volunteering.

¹⁴³ See note 18.

- In its understanding and popularity as more and more people look for online volunteers or online volunteering opportunities

It is important to notice that there still is a good way to walk. We don't have to forget that the numbers figuring in Table 13 should not be summed together as they represent different types of volunteering and not always real opportunities. For example, numbers on virtual communities do relate to virtual citizens of these communities more than online volunteering opportunities. And sometimes numbers mean projects where one or more volunteers can take part of it.

Besides all the mess on what is what and who is who, *eppur si muove*: either the nonprofit community and the volunteering community are ready for an enhanced online volunteering such as online volunteering for e-learning for development and the different online volunteering experiences show it even if the *really* good practices are scarce.

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