USING NETVIBES AS A PLE FOR LANGUAGE LEARNING

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Abstract

The continuously increasing influence and integration of the web 2.0 services and applications in users’ everyday life has, as it is evident, a corresponding impact on their learning behavior. It is a fact that the potential for real time communication, social networking, data sharing, syndication and collaboration, give users wider perspectives and greater possibilities regarding the collection and use of learning resources in order to acquire knowledge in the field of their interest.

A similar picture exists for teachers who, on the one hand, have the opportunity to exploit and take advantage of a variety of new technological tools and, on the other, the responsibility to offer their students new educational perspectives and applications, suitable to their new mentality and attitudes.

As is obvious, the support of this new educational approach could be better served by the use of informal learning environments, the creation of which is based on freely available platforms and tools and does not require a high level of technological skills from users. The "start pages" -among others-belong in this category of software tools. Some of them can provide a solid basis for the creation of Personal Learning Environments suitable for every subject and, in this case, for foreign language learning.

A personal learning space based on the Netvibes start page and created specifically for language learning is presented in this paper. This environment includes a variety of services and tools through which the user can approach a foreign language in its original form, having organized access to a variety of authentic multimedia recourses and complete collaboration opportunities with other users and the teacher. The different features and components of this environment, as well as the way it can be used in the foreign language classroom are described and conclusions deriving from the application and the perspectives that this type of environment creates for language learning are drawn.

Keywords: PLE, Netvibes, Start Pages, Language learning, web 2.0, Personal Learning Environments, collaborative tools.

1 ELEARNING AND SOCIAL SOFTWARE

Nowadays the provision of e-courses in institutions at all levels of education is based on Learning Management Systems (or Virtual Learning Environments - VLEs)\(^1\). It is widely accepted that these systems are particularly effective in the delivery of learning content, as well as in the structuring and the management of the learning procedure, as they dispose mechanisms that facilitate the enrollment of students, the deposit/transfer of assignments or files, the grading etc. Furthermore, they provide a variety of tools that allow teachers to create a course, fill it with multimedia learning content and support it via discussion fora, videoconferencing rooms, whiteboards, chat, and e-portfolios [1].

Nowadays, the educational market of VLEs is dominated by the commercial VLEs Blackboard, Desire2Learn and Canvas, as well as by the open source VLEs Moodle and Sakai. Although all of the above applications offer advanced possibilities and rich features, the operational philosophy and the pedagogical model on which they are based offer a traditional, centralized and standardized learning experience [2].

It is true that this approach in elearning has effectively served educational institutions for the last 10-15 years. However, the increasing popularity of web 2.0 applications leads to significant changes in the way users perceive education and affect the strategies they choose to reach their learning objectives. These changes are due to the daily habits and behavior of students, behavior that is becoming all the more online, following technological developments [3]; [4]. It is thus well understood that the new technological reality demands a new educational approach, that adapts to the natural way in which the

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\(^1\) According to the Distance Education Survey 2011 [5], and an equivalent research of New Media Consortium/EDUCAUSE [6], 71% of higher educational institutions base their elearning program on some Virtual Learning Environment (VLE).
students learn and that can, at the same time, allow them to build appropriate learning environments for social interaction, informal and collaborative learning.

That seems to be the opinion of several researchers who believe that the use of Social Software to form more flexible, open, free and informal personal learning spaces, will lead to the adoption of a new educational model, fully compatible with learners' lifestyle, in which the one-way delivery of knowledge is replaced by personal exploration and the connection and the interaction with others [7]; [8]; [9]; [10]; [11]; [12]; [13]; [14]. In this new model, learning takes place mainly informally, via the use of social networks and web 2.0 tools such as blogs, wikis, podcasts and the pursuit of knowledge in the outskirts of the web (long tail learning). Consequently, learners can choose, detect and compile the content they prefer, recompose it according to their needs, reinforce it with additional information and sources, re-distribute it to other users who are interested in the same issue and forge their learning course themselves while interacting with the other learners or/and their teacher [15].

As it is obvious, this educational model cannot be supported by traditional elearning systems such as VLES, but demands a digital environment that will approach or simulate the way people act, communicate and learn in their everyday lives and will support knowledge retrieval and sharing, interaction with others, informal and collaborative learning [16]. Towards this direction, most researchers in the field propose the development of Personal Learning Environments (PLEs) as the most promising solution [17]; [18]; [19]; [12]; [20].

2 PERSONAL LEARNING ENVIRONMENTS

As it is evident from the above discussion, a PLE adopts a more free and learner-centered approach based on informal learning and, thus, represents a turn from the model where users simply consume ready-made information to a model where users become autonomous and organize their learning themselves via the formation of communities, the creation, remixing and sharing of resources, and the connection and collaboration with others [21]; [22].

There is no commonly accepted definition of the term PLE. According to several researchers, PLEs are personal systems, environments or collections that consist of tools and external services which users select and organize in such a way as to build their Personal Knowledge spaces, connect and collaborate with peer learners, and serve/control their learning choosing the way to achieve their learning targets themselves [23]; [24]; [25]; [26]; [27]; [28]; [18]; [22]; [20]. Consequently, the term PLE seems to refer to a concept rather than to specific software applications. However, the majority of researchers agree that PLEs present certain general characteristics. Firstly, PLEs are open systems controlled by individuals and not by administrators. They take advantage of the cloud and the distributed knowledge recourses on the web. PLEs are fully customizable by the users, who select the tools, digital resources and digital services they want to use and include in their learning space. The users can create connections with peers, resources and services they are interested in, and arrive at knowledge through aggregation, linking and metadata tagging. Thus, users can cooperate with others building a community without attaching themselves to a formal organization or institution. As it is evident, PLEs promote informal and lifelong learning, abandoning the strict structure and procedure of a traditional elearning course –as it is the case in an LMS–. In PLEs learning is continuous and can connect formal, informal, and lifelong learning opportunities in a learner-centered way. Hence, PLEs offer a simulation of the informal way of learning people use in their everyday life, through study groups, discussions or collaboration with peers.

As mentioned earlier, there are several implementations of PLEs that differ in design, features, complexity and possibilities. From a technical point of view, contemporary PLEs are based on Ajax (Asynchronous JavaScript and XML) technologies\(^2\). However, there are certain other technologies that are widely used and equally important both for the reuse of knowledge and the production of new: RSS\(^3\), Mashups\(^4\) and Widgets\(^5\) [10]; [13]; [14].

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\(^2\) The term Ajax includes various technologies like HTML/XHTML and CSS for the visualization of information, Document Object Model (DOM) for the dynamic control of the document, Javascript (or ECMA script), XML και XSLT for the exchange of data and, XMLHttpRequest for the asynchronous data retrieve from the server [29]; [30].

\(^3\) RSS, as well as Atom, are mechanisms that allow users to be provided automatically with content from the web. Using RSS/Atom feeds websites can syndicate content to subscribed users via feed readers (aggregators).

\(^4\) A mashup is a website, a service or an application that combines content from multiple web sites into an integrated product [31]. Instead of opening several web pages, the user is able to create an individual start page pulling the information from different sources [32].
Based on this technological background, PLEs must be accessible via various devices such as laptops, mobile phones, portable media devices. In its most complex and demanding form a PLE can be specially developed software. This is the case of custom institutional platforms which integrate all the necessary for the user features, acting, at the same time, as an interface with the other institutional facilities (databases, libraries, administration etc.). In a simpler form, PLEs can be web-based tools or portals which can be used without the need for client software. That is the case of social networking sites such as Elgg\(^6\) and 43Things\(^7\) which can be considered PLEs. Finally, PLEs can be simply formed using a range of online facilities\(^{[12]}\).

As the development of custom software systems is usually a very demanding task requiring high programming skills and financing, simple users, such as educators or students, should focus on the use of specific web-available tools in order to develop a PLE that will be suitable for their needs. These tools are described by the terms “start pages”, “Ajax/web desktops” or “aggregators” and seem to offer extended possibilities for organization, interconnection and functionality, without demanding any special technological skills.

3 START PAGES

Ajax-powered personalized start pages are applications that allow users to aggregate and link services and content of various resources in order to form their personal learning space according to their specific needs\(^{[33]}\). In most cases they are freely available on the web and are accessible from any computer or portable device. Ajax start pages offer a fully customizable environment easily accessible through a visual interface, which users can configure using the tools they prefer and the information resources on the subject of interest.

As mentioned earlier, start pages are based on the core web 2.0 technologies (AJAX, XML, mashups, RSS and Widgets\(^{[34]}\);\(^{[13]}\);\(^{[24]}\);\(^{[32]}\)) and do not demand high programming skills. Users –students and educators– don’t have to write any code, as they can choose among a variety of mini-applications (widgets) suitable for their purposes\(^{[35]}\);\(^{[19]}\). Start pages may have personal or public parts, giving this way to the users the possibility to share resources and tools.

It must be noted here, that start pages were not specifically designed to support learning but rather for commercial use, and the creation of community portals or personalized workspaces. Furthermore, since not all of them adopt the same philosophy, they offer different options that can be suitable to cover different needs. Thus, the start pages available on the market can be classified into the following categories:

a) Simple start pages.

Web pages that function as a starting point to help users organize and access their favorite websites or services. To this end, they offer an easily customizable interface that enables users to organize, integrate and share online resources. The most popular applications in this category are SymbalooEDU and Myfav.es\(^8\). They both offer a simple design that uses icons (tiles) that can be adjusted to perform simple functions (connect to a webpage, play a video, etc). Using combinations of tiles teachers can create their own mixes and share them –in the case of SymbalooEDU– with their students\(^{[36]}\);\(^{[37]}\). This type of interface is too restrictive, since it does not allow the integration of sophisticated functions, but it is very convenient for mobile use as it simulates the appearance of a tablet or smartphone. Thus, it can prove to be very attractive and popular among young users, mainly, who show special preference to accessing the various services via mobile devices. Services like flavors.me can also be classified in this category. This start page offers similar possibilities, but better customization and a more web-oriented interface, as well.

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\(^{[5]}\) Widgets are desktop or web applications that provide the user an interface offering simple and efficient user interaction mechanisms with the underlying resources.

\(^{[6]}\)Elgg (2004) is an open source aggregation portal which offers a vast range of functions that support the creation of communities, the collaboration, and the production and sharing of resources among participants.

\(^{[7]}\)43 Things (2005) is a social networking website based at the concept of folksonomy and established as an online goal setting community.

\(^{[8]}\) There are also software applications such as Eight Start Page that can be downloaded and installed in users’ computer. These applications permit the users’ favorite browser home page direct customization. See http://eight.kx.cz/
b) Personal Information / Workspaces

This is the case of web applications that allow users to create open and flexible workspaces (boards) or collections of information. Many different approaches that lead to completely different implementations can be classified into this category. Spaaze and Pearless are among the most interesting applications. Spaaze focuses mainly on individual or collaborative work and acts as a limitless board on which users can define and arrange areas filled with files, video, pictures, bookmarks, labels, notes or HTML snippets. This board can be shared with other users offering, thus, extended collaborative capabilities to the participants. On the other hand, Pearltrees philosophy is the creation of information hierarchies and the creation of communities of users who share the same interests. To this end, it offers a visual bookmarking tool that utilizes a mind map-like interface which allows users to select, organize and manipulate content, create their own personal library of web content and share their collections of information (topics) with other users who share similar interests.

c) Complex start pages/RSS readers

Applications of this category offer users the possibility to create a personal page (dashboard) according to their personal taste and style (themes, colors, background, etc) and fill it with the necessary modules. This dashboard can be organized into tabs, with each tab containing user-defined customizable modules (widgets) that can perform any function the user wishes. Widgets for the most necessary functions are built-in, including support for POP3, IMAP4 and webmail, RSS reader, web storage service, social bookmarking services, media repositories and podcast support with a built-in audio player. Some of the applications of this category offer the possibility to create their own widgets and connect them with any website, account or feed server they like or assign a function to them by pasting in existing HTML or XML code [19]. Furthermore, users can also choose to "publish" certain tabs of their page which, thus, become accessible and can be used by others [38]; [39]. Some of the most popular start pages belong to this category: myYahoo, ighome, Protopage, Ustart and Netvibes.

As it is obvious, the applications of this category have the greatest potential –from an educational point of view– as they can host a variety of tools and services in one place: chat and messaging tools, collaboration tools, calendaring, scheduling and time management tools, news aggregation tools, blogging and personal publishing tools as well as social software and multimedia players.

Taking a closer look in their specifications and the functions each one of these can support, the most promising and suitable start page for a PLE addressed to educational use seems to be Netvibes, as it is superior concerning points such as the built-in features and widgets, RSS reader, customizability, and the extended supporting “Netvibes Ecosystem”.

4 A NETVIBES PLE FOR LANGUAGE LEARNING

This study aims to examine whether start page-based PLEs can effectively support foreign language learning. To this end, the creation of a PLE capable to serve the needs of educators and teachers of the French language has been decided.

In the case of foreign language learning, a key challenge for the teacher is to design a learning environment that brings learners close to the natural environment and the native speakers of the target language. Consequently, the aim of a PLE designed for language learning is to provide users the necessary tools to approach the foreign language in its original form, as well as the tools that can support the learning procedure and the communication and collaboration among participants.

For the reasons mentioned earlier, Netvibes was chosen as the best platform for the creation of this PLE. To increase ergonomics and ease of use of the PLE, it was decided that the different widgets be organized in Tabs (a feature offered by Netvibes), according to their functionality and scope.

To this end, the widgets have been arranged in six tabs:

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9 Netvibes Ecosystem is a collection of user submitted modules/widgets built using Netvibes Universal Widget API (UWA). Widgets can be tagged, rated or commented and are findable through categories or browser search [40]; [38]; [31]. Netvibes also offers the possibility of exporting individual OPML files from each page, an important feature for those who possess high programming skills [39].

10 This PLE is accessible at http://www.netvibes.com/mnemonic9007
a) Espace personnel

This tab hosts all the users’ personal services, such as communications (email accounts and Skype), social networking accounts (Facebook, Twitter), tagging services (Del.ici.us) and content creation services (blogs, podcast creation), as well as his personal bookmark collections. From this tab, the user also has access to communication widgets (such as Skype) and to a variety of productivity tools and widgets (search, to-do list, calendar, weather, calculator, etc). He can also have access to his courses in the Institutional VLEs (in this case, Moodle and eClass) and the institutional website.

As the PLE comprises two “views” (private and public) this tab can remain accessible only by the user/creator via an authentication procedure (personal page).

b) Multimedia

The purpose of this tab is to give students access to original language resources. To this end, the tab contains a collection of multimedia resources, such as videos (Youtube, Curiosphère, Védeothèque), podcasts (Podomatic, France Inter, Radio France, RFI), Web TV or Web radio emissions (TV5 monde, France TV education, radio.fr), Educational material (netprof.fr, cea.fr), ebooks, flash animations, photos, sound files or PDF files and other recommended websites with French resources. The user can also have access to files stored by the teacher in cloud services, or search his own resources using search widgets from popular educational media repositories (such as Gallica-Bibliothèque Numérique).

c) Conversations

The purpose of this tab is the same as before, but this time the provided information is written. Thus, this tab contains text feeds from several sources, such as French newspapers and magazines (Le Parisien, Le Monde, Le Figaro, Libération, Les Echos, L’Equipe), French TV or news sites (TF1, TV5, France 24, RFI) and French culture resources (France culture, universcience.tv). Feeds can be read inside the PLE either in widget mode or in the more convenient for this purpose-reader mode.

d) Activités

The “activités” tab is intended to support both individual and collaborative language activities. To this end, it is equipped with language specific widgets and tools (translator, dictionary, text to speech, voice recorder/playback) as well as with tools that can support collaboration with peers or the teacher: collaborative writing (Padlet, Pirate pad, Edupad) and collaborative work (Google Drive), a widget to access the discussion forum of the PLE (Langtech Collaboration Room), two chat/videoconferencing widgets (Flash meeting and Videoconference.com) and a mind mapping tool (Popplet). There are also selected activities and educational “Dossiers” provided by specific websites (Livemocha, TV5).

e) Jeux-Quizzes

The “Jeux-Quizzes” tab is dedicated to interactive resources and contains educational games and quizzes from several websites (TV5, Curiosphère etc).

f) Contact

In this tab there are widgets that facilitate sharing, RSS subscription to the PLE and communication with the teacher (Skype).

As mentioned earlier, this PLE disposes two “views”. In the public version of the PLE, the main tab can be excluded, as it contains the teachers’ personal information which must remain inaccessible to others. The teacher can organize the rest of the tabs according to the needs of a specific course (or subject) and then copy or move them to the public page, in order to make them publicly available. Furthermore, the teacher can create a tab dedicated to a specific lesson or topic in his personal page, fill it with all the necessary resources and tools, and then publish it to his students by moving it to his public page.

g) Resources FLE

This tab is dedicated to resources about FLE (Français Langue Etrangère). It is a typical Google search tab that can be customized to present information in a specific topic.
5 EDUCATIONAL SCENARIOS

As is clear from what has been described earlier, a start page based PLE can provide all the necessary tools with which a foreign language teacher could design and offer students a complete language course.

In order to demonstrate the way such an environment could be exploited, two training “scenarios” are described. The first scenario simulates the use of a PLE in school context (table 1).

Table 1

<table>
<thead>
<tr>
<th>Scenario 1</th>
<th>School context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aim of the course</td>
<td>introducing students to environmental subjects and, in particular, climate change</td>
</tr>
<tr>
<td>Specific objective</td>
<td>developing the skill to collect, exchange, synthesize information and draw conclusions</td>
</tr>
<tr>
<td>Linguistic awareness</td>
<td>Acquiring</td>
</tr>
<tr>
<td></td>
<td>a. Vocabulary and expressions referring to climate change</td>
</tr>
<tr>
<td></td>
<td>b. comparative and superlative adjectives</td>
</tr>
</tbody>
</table>

Procedure:
The teacher gives the students the subject, divides them into two groups and informs them on the purpose and objective of the course. Then, he suggests they perform the following steps:

1. Enter the Multimédia tab and open the “TV5-L’Actualite en video” widget. Go to Informations / météo. Find your city’s weather forecast and record the next 3 days temperatures. Compare them with the highest and lowest temperatures of other European cities, drawing the linguistic means (expressions, words, special formalities) needed from Ressources / Point du FLE / grammaire - comparaison. Go to the Activités tab and keep notes using the Padlet widget (so as to be visible to all)

2. Enter the Multimédia tab and open the TV5 monde widget. Watch the Flash Animation “L’effet de serre” and read the web page Cea.fr / dossier Climat resource. Read the “Nom de Code : CO2 / eBook” and try to locate the phenomena that affect the climate. Go to the Activités tab and record this information using the Notes widget.

3. Go to the Multimédia Tab and watch the video «Le Climat». Go to the Activités tab and use Padlet widget to note the main causes of air pollution.

4. Both groups of students go to the Conversations tab and find (a minimum of three) resources to prepare a report about the relation between climate and environment.

5. Go to the Activités tab, open the Pirate Pad Widget, and try to collaborate, in order to merge the two reports into one. You can use the Videoconferencing widget (in the same tab) to communicate during this procedure.

6. Use the Popplet widget to play a coherence game: each group gives a word on the subject (climate change) and the other must find and add another word that goes with it before or after this word (e.g. the first team gives/provides the word “rayons” and the second has to add the word “solaires”)

7. Go to Contact tab and use Skype to contact your teacher (see Videoconferencing widget on the same tab for the meeting schedule). You will have a discussion in which you have to report what you have learned about climate change. (Or discuss with him …/ present to him what…)
The second scenario simulates the use of the PLE in a professional context. In the case of professionals, interest in learning a foreign language usually does not occur in groups, but individually. The example presented in Table 2 is about an adult professional who uses the PLE to acquire the professional jargon needed in his work (self-learning of a language for specific purposes).

### Table 2

<table>
<thead>
<tr>
<th>Scenario 2</th>
<th>Professional context</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A hotel receptionist who wants to learn English quickly, in order to serve the French tourists who have booked for the summer.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aim of the course</th>
<th>Introducing students to the specific professional vocabulary (jargon).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific objective</td>
<td>Developing the skill to exchange information concerning accommodation in the hotel and the surrounding area with tourists.</td>
</tr>
<tr>
<td>Linguistic awareness</td>
<td>Acquiring</td>
</tr>
<tr>
<td></td>
<td>a. Vocabulary and expressions on the topic (places, locations, times, dates, transportation, etc.)</td>
</tr>
<tr>
<td></td>
<td>b. How to welcome people</td>
</tr>
<tr>
<td></td>
<td>c. The linguistic means to provide information about places, locations, time, and ask for clarifications (speech acts)</td>
</tr>
</tbody>
</table>

### Procedure:
The tutor informs the student about the purpose and objective of the course. Then, he asks him to perform the following steps:

1. Go to the Resources FLE tab and open the Resources en ligne/ Dictionnaires. Choose a multilingual dictionary and use the Notes Widget to make a list of all the words and phrases you think are related to your profession.

2. Enter the Multimedia tab and open the TV5 monde widget. Go to the Langue Française section and use the Notes Widget to keep a record of numbers 1-31, months, days of the week and hours of the day.

3. Go to the Conversations tab and open the “Français de spécialité Tourisme, Hôtellerie, restauration” widget. Watch all the small videos and try to understand what receptionists who talk about their profession say. Use the Notes widget to note the necessary information.

4. Go to the Activités tab and use the Chirbit widget to record as much information as you remember from the previous videos. Save your recording to Chirbit.

5. Send this recording to your teacher using your Facebook account or your email (You may also copy the embed code of this recording from Chirbit and publish it in a new widget).

6. Go to the Contact Tab and have a conversation –role play game, tourist / receptionist– with your tutor using Skype.

### 6 CONCLUSIONS

Two scenarios examining the educational use of the PLE have been presented in the previous paragraphs. It is evident from the above mentioned simulation that this environment can provide all the tools and resources by which these training scenarios could be implemented in practice, either by a community of users or by individual users for self-learning.

From a technical point of view, the only drawback, excluding some minor operational failures, seems to be the concentration of a large amount of information in a small space. The learners can be overwhelmed by such an amount of information and the large number of widgets –especially in the case of accessing the PLE through a mobile device. However, the use of the appropriate combination of a –limited– number of widgets could cover efficiently any specific educational need.
From an educational point of view, it seems that PLEs can support many educational practices (both informal and formal), such as reading short texts in the foreign language, writing in different contexts and practicing speaking and listening. Furthermore, they can cultivate several information literacy skills, such as source selection or creation of effective search strategies, promoting, thus, better understanding of the information around a specific topic. Finally, with the variety of sources they can gather in one common place, they can offer students rich and motivating learning environments that can keep their interest for much longer than traditional elearning systems. In PLEs students can combine learning with their daily practice, collaborate with others and learn the foreign language informally.

REFERENCES


