Cloud Applications for Language Learning

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ABSTRACT: *Cloud applications have big impact on electronic learning and language learning process. The proposed framework in this paper is very generic aimed at the systems teaching and web-based networks. We hope that the general framework can be customized to suit individual applications.*

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1. Introduction

English for Specific Purposes - ESP is a relatively new discipline within Applied Linguistics that bids a new learnercentered approach to English language teaching whose methodology is based on the specific needs of the learner. Several of the vocational language projects make use of a fullfledged virtual English for specific purposes learning environment. These projects have been created with funding supplied by EU grant programs, including Lingua, Leonardo, and Socrates. These projects, can be implemented in Moodle and make extensive use of new media and collaborative tools. This also incorporates language e-portfolios. Interesting projects in this area also include BeCult and Online VoCAL/Weblingua [10], both of which have richly developed tools and media. Creating effective electronic tools for language learning frequently requires large data sets containing extensive examples of actual human language use. Collections of authentic language in spoken and written forms provide developers the means to enrich their applications with real world examples. As the Internet continues to expand exponentially, the vast "CLOUD" of Web pages created provides a nearly inexhaustible and continuously updated language bank, particularly in English. The issue remains, however, how to make practical use of large amounts of data for English for Specific Purposes learning, given storage and data processing demands. In fact, one may ask 'What is the difference between the ESP and General English approach?' Hutchinson et al. answer this quite simply, "in theory nothing, in practice a great deal".

English for Specific Purposess (ESP) is known as a learner-centered approach to teaching English as a foreign or second language. It meets the needs of (mostly) adult learners who need to learn a foreign language for use in their specific fields, such

as science, technology, medicine, leisure, and academic learning.

Kennedy and Bolitho [11] point out that ESP is based on "an investigation of the purposes of the learner and the set of communicative needs arising from these purposes", figure 1.

ESP concentrates more on language in context than on teaching grammar and language structures. It covers subjects varying from accounting or computer science to tourism and business management. The ESP focal point is that English is not taught as a subject separated from the students real world (or wishes); instead, it is integrated into a subject matter area important to the learners.

Figure 1. ESP environment

Absolute Characteristics of English for Specific Purposes are:

1. ESP is defined to meet specific needs of the learners

2. ESP makes use of underlying methodology and activities of the discipline it serves

3. ESP is centered on the language appropriate to these activities in terms of grammar, lexis, register, study skills, discourse and genre.

Variable Characteristics of English for Specific Purposes are:

1. ESP may be related to or designed for specific disciplines

2. ESP may use, in specific teaching situations, a different methodology from that of General English

3. ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level.

4. ESP is generally designed for intermediate or advanced students.

5. Most ESP courses assume some basic knowledge of the language systems ESP are offered by different educationalists and we can identifies three types of ESP :

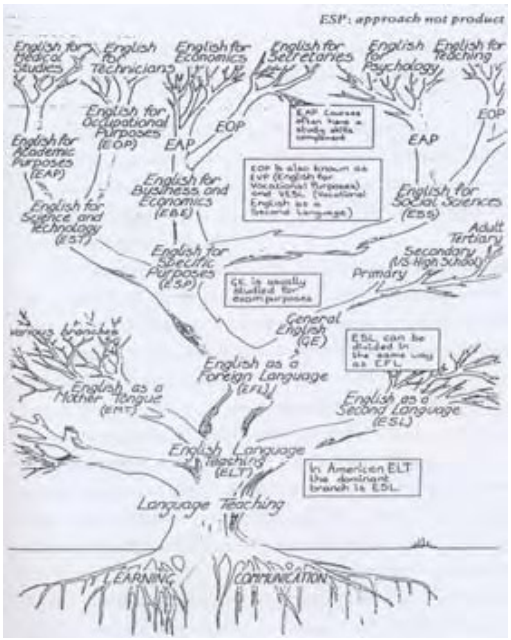

Figure 2. ESP tree

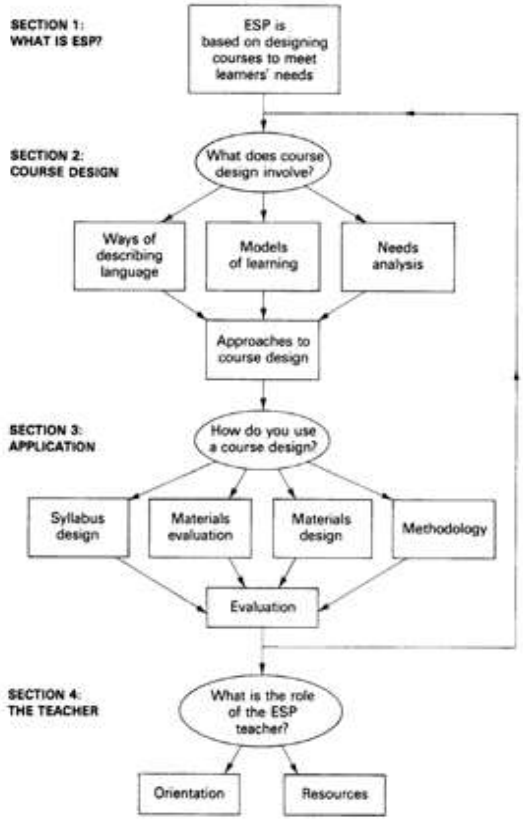

Figure 1: Outline of 'A learning-centred approach to ESP'

Figure 3. Outline of a learning centred approach to ESP

1. English as a restricted language;

2. English for academic and occupational purposess;

3. English with specific topics.

But, ESP tree looks like in the figure 2.

Algorithm that shows the basic level in the development of ESP learning based on one of the platforms can be seen in figure 3.

ESP is a relatively new discipline within Applied Linguistics that bids a new learner-centered approach to English language teaching whose methodology is based on the specific needs of the learner. Defined to meet the specific needs of the learners, ESP makes use of methodology and the activities of the discipline it serves by focusing on the language appropriate to these activities. So, ESP has become such an important (somme might say the most important) part of the English language teaching.

2. Exposition

The twenty first century marked pedagogy knowledge so that learning is not a process of "receiving knowledge" but an active process in which the student contextualizes and builds knowledge mastering ESP learning strategies, there is a need to be in an electronic learning pedagogical application of these elements. Popular name Liens. 2.0 marked the transition from HTML to XML and emergence of other tools that enable the organization of social interaction in a group on the Internet, even when it comes to very large groups of people. Thus, at the beginning of the twenty first century, electronic learning enables and promotes the active role of students in the process of teaching, group learning and delivery of multimedia materials on different platforms (computer, mobile phone ...).

In this modern age, many new technologies are being introduced every day and make human life easier. Web-based technologies today have a major contribution to reducing the routine work that users have to invest in order to obtain the required information. They introduced online education services for a range of different courses, based on the Internet platform. Widespread use [10] of XML for encoding corpora and text collections is moving towards a resolution of this problem. XML has become the de facto standard for encoding of language corpora. XML recommends itself because of its platform independence, extensibility, and widespread acceptance by software companies and researchers.

Standardizing text encoding in XML greatly facilitates data interchange. Since structural and semantic information about a text is separated from its presentation in XML, the same encoded text can be displayed in multiple ways, using CSS style sheets or XSLT transformations. With the advent of XML as the preferred system for representation of corpus resources, existing tools have been modified to work with XML, while new applications have been created that are designed to be XML ready. The Linguist's Toolbox, for example, now features export to XML. The text searching software, Xaira, designed to be used with the British National Corpus, has been re-written as a general purposes XML search engine with full Unicode support. The Unicode editor CLaRK has been designed specifically to work with XML. Language archives can now be submitted to OLAC (Open Language Archives Community) by uploading a single XML file containing the necessary metadata information about the resource. Tools for the semi-automatic annotation of corpus data are being developed, such as @nnotate from the University of Saarland. DepAnn is a treebank creation tool, which uses Tiger-XML, the accepted standard for treebank encoding. EULIA, from the University of the Basque Country, provides a graphical Web interface for editing annotated corpora. These kinds of tools will become increasingly important as language data sets increase in size, since manually annotating texts to create treebanks is a slow and expensive process.

However, new platform - Cloud computing is essentially a highly flexible, cost-effective," user friendly" checked platform, whose main task is delivery and providing business or consumer IT services over the Internet. Resources Cloud systems are evolving very rapidly, along with all processes applications, and services regardless of the user's location or device within a broadband Internet network. They represent a large pool of easily usable and accessible virtualized resources (such as hardware, development platforms and / or services). These resources can be dynamically reconfigured to adapt scale load, which also achieves the optimal utilization of resources. Cloud computing customers can use one or more Cloud computing services based on their business needs. There are many ways to approach clients of Cloud computing through various forms of hardware devices such as PDAs, mobile phones, standard computers, portable computers, and software applications such as Web browsers ect. Fig. 4.

Architecture of ESP- learning cloud Cloud Computing [12] is a task that has been encapsulated in a way that it can be automated and supplied to the clients in a consistent and constant way. Any component can be considered as a service, from entities closest to hardware such as the storage space or the computational time, to software components aimed at authenticating a user or to manage the mailing, the management of a data base or the monitoring of the use of the system resources.

Both the public and private cloud models are now in use. Available to anyone with the Internet, the public models include Infrastructure as a Service (IaaS), Software as a Service (SaaS) Cloud as IBM LotusLive, Platform as a Service (PaaS) Cloud as IBM Computing on demand, and security and data protection as a service (SDPaaS) Cloud for example, such as IBM in Management service.

IaaS is the lowest layer in a network environment. The user may request the provision of standard services, including computing power and resources for memorizing data. It sets these resources in the virtual environment and thus provides the necessary computing power and resources, regardless of the strength of their devices.

PaaS is a higher level of abstraction. It serves to secure the development environment, testing environment, servers platforms and other services, where users can develop applications based on the Internet as well as other server services.

SaaS is a software distribution model, designed for delivery to Web_, whom users can post and access via Internet hosting. SaaS providers are seeking to build information for the entire network infrastructure, software, hardware, operating platform and are responsible for implementation of all service, maintenance and other services.

ESP learning based on Cloud technology is a subset of Cloud Computing applied to the field of education. What is the future for the development of technology and e-learning infrastructure. ESP based training Cloud_u has all the necessary resources, such as hardware and software to enhance traditional learning infrastructure [14], figure 4. Since educational materials for ESP - learning systems are virtualised in Cloud servers, these materials are made available for the use of students and other educational institutions and businesses. There are two important Cloud environments for students and other users which offer a wide array of services for ESP- learning: Virtual (Virtual Learning Environment - VLE) and personal (Personal Learning Environment - PLE).

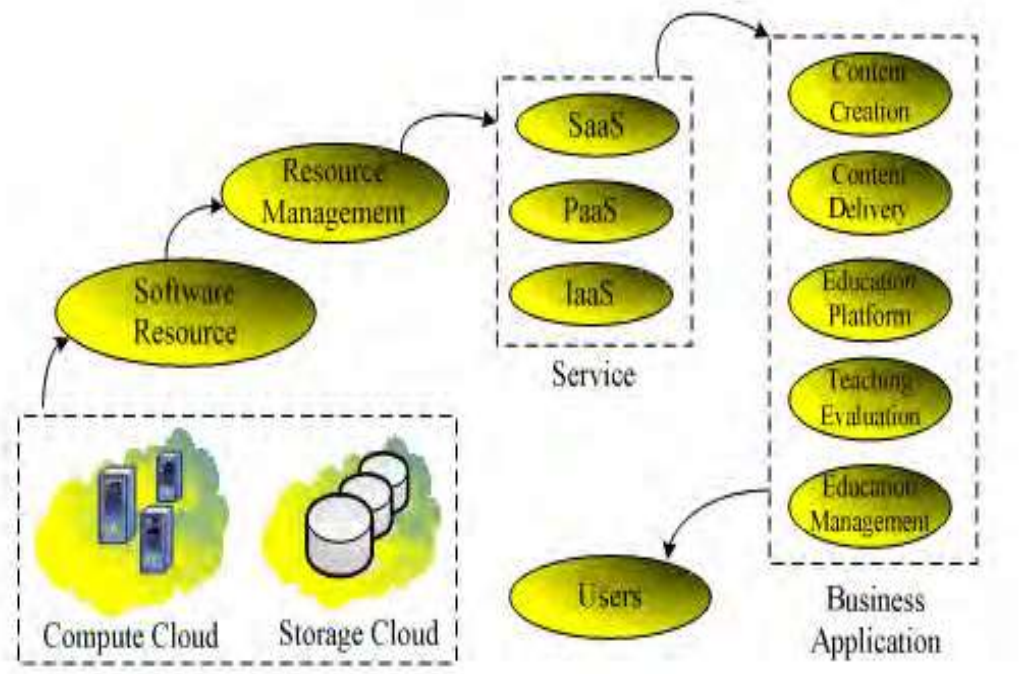

Figure 4. Architecture of ESP- learning cloud

PLE offers users a wide range of services, some of which are:

1) The user can edit their own learning objectives in its own system for ESP-learning.

2) The user can operate the system for ESP-learning across the organization and learning materials and have control over all processes in the system.

3) The user can interact in the learning process with other users in the same system for ESP-learning.

For users there are many advantages of using this system:

• Lower costs, users of the system for ESP-learning do not need to have a high-performance computers to run their applications. They safely run with Cloud platforms and services are paid on a pay-as-you-go basis. Fixed monthly costs are low because Cloud computing networks are taking advantage by bringing large numbers - millions of users, and the low cost of functioning at information centers, which are managed from another location.

• No up-front investment in IT, which is particularly attractive to small and medium education institutions, enterprises and newly founded companies, and since the applications are processed on a Cloud platform, client machines can create problems in their work.

• Since the applications for ESP-learning are centered on the powerful Cloud servers, the software automatically updates with Cloud sources. No need to install and maintain servers, managed superstructure or care about whether the software is compatible with the hardware.

• No need for license management applications.

• Students and other users have numerous advantages using Cloud_a for ESP-learning. Can run on-line courses, attend online exams, receive feedback from professors and instructors, and send their projects and specific assignments to be assessed. The system can easily adapt to the needs of more users or additional services - or it can reduce the activity when seasonal demand for services drops.

• If any of the fonts and format documents do not open properly on other devices, users of Cloud systems do not have to worry about this problem because such documents are now open directly to the cloud system. Therefore, there is the ability to access documents and features from any machine instead of attachment to a particular device.

• The system can be expanded, and does not have to be purchased, which is beneficial to some companies that are still developing.

Outrank the teachers are great and will mention only:

• They are preparing online offers for student testing, practicing and creating better resources for students through the content management, access to tests and their preparation, access to the content of students' homework, projects that the students have done. Also, they send feedback and communicate with students through on-line forums.

3. Conclusion

Cloud computing represents a new platform that can be used as the concept of e-learning purposess, based on earlier models of distributed services, which have been created in the last decade and allow easy access to the network, at the request of the user, set the Shared Resource.

Cloud Computing has found a large number of applications: computing in the form of services (utility computing), the software in the form of services (software-as-a-service), network resources, servers, hard disk space, services on demand (on-demand services) , systems of electronic learning (e-learning), other applications and services that can be rapidly provided to users on

the use and with minimal intervention or action by the provider. Advantages of these solutions in e-learning are indisputable both for users and for teachers who are preparing courses.

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