

**Universidad Central “Marta Abreu” de Las Villas
School of Humanities
Department of English Language**

DIPLOMA PAPER



A DIGITAL LIBRARY FOR ENGLISH LANGUAGE II- A TOOL FOR IMPROVING ITS BIBLIOGRAPHY

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***What is it that differentiates students
who make it from those who do not?
This list is long, but very prominent
among the factors is mastery of
academic language.***

—Lily Wong Fillmore, Ph.D.



DEDICATION

To my mother



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I would like to thank every person who made this diploma paper possible for supporting and encouraging me to never give up. Special thanks to my beautiful family: my mom, my dad, my grandpa, my grandmother and my brother because they helped me achieve my goals and dreams no matter what and because they fought by my side in every battle and celebrated every success. Thank you for my dad's joy, my brother's intelligence, my grandpa's advice and grandma's faith. To my mother, the light of my life and my guardian angel, you are my strength and inspiration. To my beloved boyfriend for his unconditional love and support. To my talented and dear supervisor Juana Idania for her hard work and devotion. To all the professors who helped me during the process in many ways, specially to Alicia who made this possible, Ernesto for his continued and valuable support, Mayra for her useful aid, Nosley, Miñoso, Yuliet and Geraldo for their contribution and constructive suggestions.



ABSTRACT

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In the English Language course with a second foreign language: French at the Universidad Central «Marta Abreu» de Las Villas, there are some limitations in the basic and complementary bibliography of the subject English Language II. The purpose of this research was to propose a Digital Library to systematize the bibliography to satisfy the students' needs. The study was carried out from a qualitative methodology. The needs analysis allowed the selection and organization of the bibliography for the proposal. For the design of the Digital Library for English Language II (DLELII) the Greenstone Digital Library Software was used. Specialists from the area of English Language and Scientific and Technological Information evaluated the proposal and agreed that it meets requirements such as bibliographic completeness, updating, variety of sources, easy accessibility which resulted in a valid proposal for the improvement of the teaching and learning process of the subject.

Keywords: Information and Communication Technologies, Digital Library, Academic English, bibliography



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INTRODUCTION

INTRODUCTION

Globalization has influenced the educational philosophy and classroom practices all over the world: the convergence of educational organizations models, the internationalization of key competencies and the diffusion of large-scale assessment of student's performance (PISA-OECD), are only relevant aspects of this process. In this sense, Cornali, F. and Tirocchi, S. (2012) agreed that in a globalized world characterized by a convergence culture, school systems should work in order to integrate ICTs in ordinary learning processes. That means to provide students with competencies and skills, to experiment new didactic models based on the use of ICTs, of web 2.0 tools, to contribute to the construction of digital literacy.

In this context, English has become increasingly dominant as a world language in higher education. Students, whose mother tongue is not English, often have to develop a high level of competence in this language to pursue their studies. Moreover, studies in higher education require competences, specifically in Academic English. According to Karimkhanlui G. (2005), Academic English is a collection of genres of English, each of which is shaped by the functional requirements and social conventions of academic communities of discourse. Familiarity with the conventions and the rules which apply to different genres is an important factor in the student's progress.

Consequently, the incorporation of Academic English in the training of new professionals in fields such as translation and interpreting is required to succeed in academic and scientific contexts. Wray Gillet, A. (2006) states that English For Academic Purposes (EAP) entails training students, usually in a higher education setting, to use language appropriately for study. It is a challenging and multi-faceted area within the wider field of English Language Learning and Teaching (ELT), and is one of the most common forms of English for Specific Purposes (ESP). Thus, learning EAP provides comprehensive preparation to perform well in an English speaking academic context, which may include different areas of study. (Lockwood, R. 2016)

On the other hand, the methodology of language teaching and learning has been shifting from content-centered curricula to competency-based curricula also associated with moves away from teacher-centered approaches of delivery to student-centered forms. This methodology takes into account the use of ICTs to

provide the language teacher and learner with multimedia resources, such as texts, graphics, sound, animation and video linked together, offering an authentic learning environment. Through technology-facilitated approaches, contemporary learning settings encourage students to take responsibility for their own learning. (Oliver, 2002).

Therefore, higher education institutions should lead in drawing on the advantages and potential of the ICTs, ensuring quality and maintaining high standards for education practices and outcomes in a spirit of openness, equity and international co-operation (UNESCO, 1998). In Cuba, universities continue to actively interact with ITCs at a social and institutional level, which is expressed in a new vision regarding its use, availability and access in order to fulfill their mission. Among the most prestigious Cuban Universities, the Universidad Central “Marta Abreu” de Las Villas is also engaged in these goals. It has a Moodle platform, which facilitates professors and students the access to sources of information for the different academic courses.

However, in the context of *the teaching and learning process of the subject English Language II*, taught in the academic course *English Language with a second foreign language: French*, at this university, some limitations in the access to its basic and complementary bibliography have been evidenced. *The bibliography of the subject* is mainly taken from the preparation courses of the IELTS (International English Language Testing System) in its academic version, which are *in a digital format*. So, *it is not always available and organized in a way that, both teachers and students could manage the information of the subject successfully*. Thus, teachers and learners demand a systematization of the bibliography to meet students’ needs and eventually enable life-long learning.

English Language II, the research ground of this project, is taken in second year and it is part of the English Language discipline. Its main instructional objectives are addressed to the development of communicative skills in English, the improvement of study skills and communicative strategies in academic settings taking into account the students’ professional profile expressed in the curriculum of the course (translator, interpreter and language professor)

In the light of this problem, the diploma paper seeks to investigate:

-How can the bibliography of the subject English Language II of the academic course English Language with a second foreign language: French be systematized in order to meet students' needs?

The **overall objective** of this diploma paper is:

-to propose a Digital Library for systematizing the bibliography of the subject English Language II in order to meet students' needs in the academic course English Language with a second foreign language: French.

The following **specific objectives** guided the study:

- ✓ To determine the theoretical and methodological foundations of the use of ICTs and digital library as a tool for the improvement of the teaching and learning process of English for Academic Purposes in higher education.
- ✓ To diagnose the needs concerning the bibliography of the subject English Language II and also the availability of ICTs resources in the research context for both professors and students of the second year of English language with a second foreign language: French.
- ✓ To design the Digital Library for systematizing the bibliography of the subject English Language II of the academic course English Language with a second foreign language: French.
- ✓ To assess the Digital Library for systematizing the bibliography of the subject English Language II through specialists' criteria.

In order to accomplish the general and specific objectives of this research, different methods were applied.

The research process mainly adopted a qualitative research perspective. This method was deemed the most appropriate in social sciences supported by the dialectical-materialistic method from which some theoretical, empirical and statistical and/or mathematical methods are derived:

From the theoretical level

- Historical-logical: studied the different stages through which the ICTs have evolved and the different conceptions used in the educational context, specifically in respect to the design and use of digital libraries as one of its various tools for improving the teaching and learning process. The evolution of English for Academic Purposes was also reviewed to find out the latest developments in this field.

- Analytical-synthetic: applied to develop the whole process of research and to synthesize the most important elements related with the object and field of the study.
- Structural-systemic: used throughout the whole research process and in the design of the proposal from a logical and systematized view.
- Inductive-deductive: This reasoning made possible the generalization about the topic at a global level from particular elements.

From the empirical level

- Document analysis: was used to analyze the main documents concerning the research context with the purpose of finding out what is regulated in relation to the teaching and learning process of the subject English Language II.
- Participant observation: was applied to gain a closer insight into students' practices in respect to information management in the subject English Language II.
- Surveys: were applied to the sample of students to get a deep understanding of the bibliography needs in the subject and how it may affect their communicative and learning performance in English Language II. Furthermore, the student's opinions, ideas and motivations towards the subject were relevant in this research.
- In-depth interviews: to professors and department authorities were carried out to determine their conceptions about English for Academic Purposes relevance and the interdisciplinary relationships with other main subjects of the course.
- Specialist criteria: was applied to assess the Digital Library for systematizing the bibliography of the subject English Language II. It included specialists in the area of Scientific and Technological Information and EAP language specialists.

From the mathematical and statistical level various methods were applied to analyze the frequency, and the percentages of the data obtained through the different empirical methods.

- Table analysis and graph representation: It was used in order to group data in different classes and to distribute the absolute frequencies and percentage and describe the results.
- Sampling Technique and Sample Size: In selecting the participants, an intentionally selected sampling procedure was employed. In this case, second year students of English Language with a second foreign language: French as well as the principal professor. This group was selected because they are currently taking the subject English Language II.

Practical Contribution

The Digital Library for English Language II (DLELII) contributes to the systematization and expansion of the bibliography in the subject English Language II. The DLELII offers a coherent and consistent framework for the organization of the materials according to the contents of the subject, units and language academic skills into a comprehensive and didactic structure. It offers feasible access to the information, completeness and updated variety of reliable materials.

This diploma paper is structured into three chapters. Chapter 1 deals with the theoretical considerations for the use of ICTs in the university and in the academic course English Language with a second foreign language French to improve the teaching and learning process of the subject English language II. Chapter 2 describes the methodological approach, characteristics of the sample, research methods as well as the results derived from the needs and documents analyzed, as well as the analysis of the results obtained from the diagnosis. Chapter 3 describes the design of the Digital Library for the subject, its description, as well as the specialists' criteria about the proposal.

CHAPTER I



CHAPTER I. THEORETICAL CONSIDERATIONS ABOUT INFORMATION AND COMMUNICATION TECHNOLOGIES AND THEIR IMPLEMENTATION IN THE ENGLISH LANGUAGE TEACHING AND LEARNING PROCESS.

This chapter aims to develop a framework for understanding Information and Communication Technologies, the Digital Library as an ICTs tool and its implementation in the teaching and learning process of English for Academic Purposes. It is organized in three background sections.

The first section is devoted to the ICTs and their role in education.

The second one deals with the research background in respect to the development of Digital Libraries in education, as a main ICTs tool.

The third and last section contextualizes English for Academic Purposes, its main features and aims.

1. Information and Communication Technologies

1.1 Defining Information and Communication Technologies

Information and Communication Technologies emphasize the role of unified communications and the integration of telecommunications, computers as well as necessary enterprise software, middleware, storage and audio-visual systems, which enable users to access, store, transmit and manipulate information. (Fox, 1999)

Near the end of the 1980s, the term “computers” was replaced by “IT” (Information Technology) signifying a shift of focus from computing technology to the capacity to store and retrieve information. This was followed by the introduction of the term “ICTs” (Information and Communication Technologies) around 1992, when e-mail started to become available to the general public. (Pelgrum W.J. and Law, 2003)

Even though the term is sometimes mistakenly used to refer only to computers, according to a United Nations report (1999), ICTs cover Internet service provision, telecommunications equipment and services, information technology equipment and services, media and broadcasting, libraries and documentation centers, commercial information providers, network-based information services, etcetera. Thus, as reported by UNESCO (2002), Information and Communication

Technologies (ICTs) may be regarded as the combination of “Informatics technology” with other related technology, specifically communication.

In this sense, there are several assumptions which classify ICTs as a fundamental development tool of the 21st Century. From the macro level, ICTs may be able to improve and strengthen the efficiency of developing countries’ industrial infrastructure; enhance their overall economic performance; and strengthen their competitive capacities in the global market. (Communication Statistics Unit, 2006).

At the micro level, the Communication Statistics Unit (2006) assumes that ICTs will contribute to improvements in the provision of basic social services, help to disseminate valuable information on production and conservation, improve the efficiency of governments; and enhance the provision of health and education. In other words, ICTs are expected to improve efficiency and increase access to knowledge and expertise.

1.1.2 Role of ICTs in education

In respect to their impact in education, it is considered that the rapid global technological advancement and economic development places a great investment into this field. Nowadays, with the expansion of knowledge, advancement of technology as well as globalization issues, the ‘teaching’ profession becomes a central figure and most challenging, for it requires new planning and technological adaptation to cope with cultural dynamism. Professors are implementers, and thus need to learn and apply new technologies into their classroom instructions. (Tedla, 2012)

In fact, their implementation in the classrooms started in the 1990s. It was a decade of computer communication and information access; therefore, educators became more focused on the use of technology to improve students’ learning as a rationale for investment. However, at the beginning, computers were considered a threat to some professors, since it was thought that these devices would “take over” the job of professors. Nonetheless, these assumptions proved to be wrong. Teaching and learning are social processes and require communication between teachers and learners; therefore, technology facilitates, but does not replace these social processes (Bates & Poole 2003).

Then, during the last two decades, there has been a rapid growth in the use and development of ICTs which has been followed “by the recognition of the

potential for such technology to transform the classroom environment” (Ainley, Enger & Searle, 2008; Erstad, 2008; Law, 2009). Consequently, teachers have learnt to apply them in school and they both work together in order to improve students’ education since then.

It is also important to add that the use of Information and Communication Technologies in education has been divided into two broad categories: ICTs for Education and ICTs in Education. According to Tedla “ICTs for education refers to the development of ICTs specifically for teaching and learning purposes, while the ICTs in education involves the adoption of general components of information and communication technologies in the teaching and learning process. ICTs constitute the great hope of new education, the great liberator, the common currency of the ‘knowledge age’.”

As stated by Tedla (2012), there is substantial evidence that Information and Communication Technologies promote a good quality education and effective teaching- learning atmosphere for both student and teacher. Several research studies indicate that they provide educational opportunities and environmental readiness for classroom instruction. Essentially, ICTs play a greater role in generating knowledge and processing information for problem solving and further exploration.

Other advantages are highlighted by the fact that they have the potential to innovate, accelerate, enrich, and deepen skills. They also motivate and engage students relating school experience to work practices, creating economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change (Davis and Tearle, 1999; Lemke and Coughlin, 1998; cited by Yusuf, 2005). They are basically our society’s efforts to teach its current and emerging citizens valuable knowledge and skills around computing and communication devices, software that operates them, applications that run on them and systems that are built with them.

In the 21st century, the ability to work with ICTs is becoming as essential to education, life and workplace success as "reading, writing and arithmetic". ICTs Digital Literacy should be considered a basic skill by educational systems, something taught to and assessed for all students.

1.1.3 ICTs in higher education

The same happens in higher education, throughout history, universities have been a strategic element in the development and transformation of society. Higher education institutions have been adjusted to people's needs according to the changing times and circumstances providing society with the acquisition and spread of knowledge. Today, the main goal of the university, as a higher education institution is aimed at that principle and ICTs have become vital strategies for the betterment of the educational sector (Dunmill and Arslanagic, 2006).

Associated with the students' needs, many authors consider that conventional teaching in higher education in the past used to emphasize content. Actually, for many years, the courses have been written around textbooks, teachers have taught through lectures and presentations interspersed with tutorial and learning activities designed to consolidate and rehearse the content. However, contemporary settings are favoring curricula that not only focus on the content but also promote competency and performance. Curricula are starting to emphasize capabilities and to be more concerned for how the information will be used instead of for what the information is. (Oliver, 2002)

Therefore, universities have begun to develop ICTs strategies to deal with the need to respond to rapid changes in technology, which affect content of nearly every course; students must be up-to-date with the latest systems and software if they are to keep pace with the current demands in the knowledge (Gallimore, 1996). ICT provides efficiencies in terms of program delivery (Oliver & Short, 1997); support for customized educational programs to meet the needs of individual learners (Kennedy & McNaught, 1997); and a growing use of the Internet and World Wide Web (www) as tools for information access and communication (Oliver & Towers, 1999).

Furthermore, ICTs offer better information access, synchronous learning and motivation towards the given courses. Both teachers and learners can choose more appropriate applications which are flexible in time, in place, personalized, reusable, adapted to specific domains and more cost-efficient (Fisser, 2001; Pelliccione, 2001).

In fact, there are different ways in which ICTs can be applied in the learning environment. For instance, blended learning and e-learning. According to (Kanchana, 2016), the former is "an intentional integration of traditional and online learning in order to provide educational opportunities that maximize the benefits of

each mode of delivery and thus effectively facilitate student's learning." "E-learning refers to the use of ICTs to enhance and support teaching and learning processes. It is the instructional content or learning experiences delivered or enabled by electronic technologies and it incorporates a wide variety of learning strategies and ICTs applications for exchanging information and gaining knowledge." (Commission on Technology and Adult Learning, 2001; OECD, 2005)

Among the existing e-learning strategies and applications are television and radio; Compact Discs (CDs) and Digital Versatile Discs (DVDs); video conferencing; mobile technologies; web-based technologies; and electronic learning platforms (Sife, A. S., Lwoga, E.T. and Sanga, C., 2007). The latter, according to Sife, A. S., is used for the delivery of learning content and facilitation of learning process." Many e-learning platforms currently available are based on either proprietary e-learning software (PES) or open source e-learning software (OSS). Essentially, there is a variety of ICTs applications used in these platforms: Digital Library (DL), multimedia and software. The previous one is increasingly becoming a key element in the development of the teaching and learning process of any subject matter.

In respect to digital libraries, it is evidenced that they are also widely used by the UNESCO and other organizations to bring knowledge to every possible place in the planet, since they allow users to access to an extensive variety of reliable sources and materials without losing track of their main purpose as occurs with Internet. In the information superhighway, users sometimes get lost in such a big amount of available information. In the case of language learning, Wu, Shaoqun and Witten, Ian H. (2006) state that "the Internet offers innumerable language resources, learners and teachers alike face the challenge of discovering usable material. Search engines return an overwhelming amount of dross in response to any query, and locating suitable sources demands skill and judgment. When learners study on their own, it is hard for them to locate material that matches their language ability."

1.2 Integrating ICTs into foreign language teaching and learning process through a Digital Library

1.2.1 Historical account on the use of Digital Library

The first antecedent of digital libraries was traced back in 1994 in the US as an initiative from the National Science Foundation (NSF), the Department of Defense Advanced Research Projects Agency (ARPA), and the National Aeronautics and Space

Administration (NASA) which main goal was to dedicate a part of US federal funds among six universities for 'digital library' research. These projects were held at Carnegie Mellon University, the University of California-Berkeley, the University of Michigan, the University of Illinois, the University of California-Santa Barbara, and Stanford University. These projects demonstrated the importance of DL.

Later, by 1996, social scientists who had previously worked with conventional libraries tried to broaden the term "Digital Libraries" (Bishop and Star 1996; Borgman et al. 1996). However, the real breakthrough came in late 1998 when the US federal government issued their highly funded DL-2 awards (Griffin 1999) to projects that contained some elements of traditional library service, such as custodianship, sustainability, and relationship to a community of users. Also around that time, administrators of conventional libraries began building serious digital components.

Afterwards, there was a "developing" stage of digital libraries and efforts started to focus on more operational projects. By the late 1990s, particularly under the influence of the US Digital Library Federation, projects began to address traditional library components such as stewardship over a collection and interoperability between collections. Since then, some attempts for defining digital libraries have been adopted all over the world by many academics, especially in the field of education. Therefore, the author selected the most suitable ones for this diploma paper.

"digital libraries ... [provide] users with coherent access to a very large, organized repository of information and knowledge."

The previous definition given by Lynch (1994) states the general idea of the concept, however, it does not offer a comprehensive view regarding the type of information to be included in the educational field and the way students and professors could access to the content, or the kind of information they may obtain.

On the other hand, according to E. A. Fox (1999), a Digital Library, (also referred to as electronic library, virtual library or digital repository), is a focused collection of digital objects that can include text, visual material, audio material, video material, stored as electronic media formats (as opposed to print, micro form, or other media), along with means for organizing, storing, and retrieving the files and media contained in the library collection.

Fox provides a more complete definition; but some other definitions need to be considered, since technologies evolve so fast, there is a need to provide a more updated background.

This is the definition proposed by a group of well-known authors: Ian H. Witten, David Bainbridge, and David M. Nichols, in 2010.

“Digital Libraries are focused collections of digital objects, including text, video, and audio, along with methods for access and retrieval, and for selection, organization, and maintenance.”

As it can be seen, even though the previous definition was proposed in a concise way, it is precise, exhaustive and comprehensive. It provides a clear explanation regarding the main contents in the collection of a Digital Library and the kind of information that can be found, as well as the existence of different methods in which the information may be found and organized.

To sum up the previous definitions, a Digital Library is a digital, organized and comprehensive collection of information, which may include documents, texts, pictures, models, audio, video, etc. with an interactivity between the user and the software. It allows the user to access the information provided by flexible searching tools in a feasible way.

1.2.2 Features and principles of the Digital Library

Many well-known authors have described the main features of a DL in education, among them, Jonathan Steur (1992), C. Lynch and H. Garcia-Molina (1995), Dr Mayank Trivedi, University Librarian (2010) and Caroline R. Arms (2011). The author of this research agrees with the characteristics given by C. Lynch and H. Garcia-Molina (1995) who considered that when designing and implementing digital libraries, there are several aspects to be taken into account:

- Interoperability: how to confederate heterogeneous and autonomous digital libraries to provide users with a coherent view of the various resources in these tools.
- Description of objects and repositories: describe digital objects and collections to facilitate the use of mechanisms such as protocols that support distributed search and retrieval and provide the foundation for effective interoperability.
- Collection management and organization: incorporating information resources on the network into managed collections, rights management, payment and control, non-textual and multimedia information capture, organization, storage, indexing and retrieval.

In order to organize the collections and to catalogue and index them, metadata is used. According to Witten, Bainbridge & Nichols, *Digital Libraries in Education Specialized Learning Course. Study Guide* (2006) metadata is often characterized as “data about data” – is a kind of raw material for digital libraries. It provides the basis for organizing both digital and traditional libraries. Such metadata specification makes the process of finding and using a resource more efficient by providing a structure of defined elements that describe, or catalogue, the learning resource, along with requirements about how the elements are to be used and represented. The most widely used is Dublin Core (DC). (Kalinichenko, et al., 2003)

- User interfaces and human-computer interaction: user behavior modeling, display of information, visualization and navigation of large information collections, linkage to information manipulation/analysis tools, adaptability to variations in user workstations and network bandwidth.

These human-computer interactions have always been supported by libraries with the fund of knowledge, interactions that come in many shapes and sizes...Interacting with knowledge is what lifelong learning is all about.” (Arms, 2000)

Another feature, not given by this author and that is a key element in education especially in e-learning is color. Consequently, an appropriate use of colors in the design of a software or in Internet plays a vital role in the enhancement of knowledge acquisition. According to Karla Gutierrez in *6 Ways Color Psychology Can Be Used to Design Effective eLearning*: “Colors are powerful psychological triggers that help users learn better by changing their perception and evoking emotions.” “The world is filled with different colors and they have the power to affect the human mind.” (Digital-Tutors Team)

In respect to the main principles of a DL in the educational field, Dong & M. Agogino (2001) and other researchers describe them taking into consideration the information architecture of an educational digital library in order to meet learners’ and educators’ needs:

- Information Organization:

To organize information may provide opportunities for students and educators to create, synthesize, manipulate or debate content rather than merely to passively receive instruction. Separating content and context, or content and learning

processes, affords learners the flexibility of applying learning objects towards different instructional strategies to teach the same or related subject matter.

- Information Labeling:

To label resources with pedagogical identifiers such as age group, teaching method, and academic standards to indicate educational uses. Using appropriate instructional strategies for a particular level of learning and incorporating necessary conditions for learning presentation are significant components of success associated with a specific instructional delivery mechanism. The effectiveness of the learning resource hinges on the type of learning undertaken, whether the pedagogical style is inquiry-based, project-based, peer based, or model-based, among others.

- Information Navigation:

To guide the collection and adaptation of learning elements towards individual learning goals. Best possible instruction involves individualized treatments that differ in structure and completeness depending on the learning goals and ability of the learner. Research has shown that curriculum with highly structured treatments seem to help students with low ability but hinder those with high abilities. The navigation scheme of the Digital Library acts as a proxy for curriculum as far as how the digital library guides users through the task of finding learning elements. The implication for the information architecture then is to balance prescriptive navigation while allowing users ability to explore.

- Information Search:

To optimize search to meet the interests, knowledge, understanding, abilities, and experiences of the users in their roles as educators or students. Educational objectives should be searchable and listed in the search results. The extent to which a learning element is relevant correlates with how the learning element achieves a learning goal.

- Methodology:

This information design methodology follows along the principles of “contextual design.” It suggests that systems development should follow a deep understanding of the users’ work, thereby explicitly defining the interaction of the users with the system. Several tactics for obtaining this task information were utilized: 1) a review of user needs provided by case studies and user scenarios; 2) a simple benchmark

of two existing, prototypical educational digital libraries; and 3) user personas and task modeling.

All in all, digital libraries have achieved a fundamental role in our knowledge society by revolutionizing the world, education and classroom. All these features and principles will be used in this research in order to elaborate a DL that meets the students' needs in the subject English Language II aimed at developing academic language skills.

There are two more principles that were not considered by Dong & M. Agogino (2001) and that complements this aspect. They were given by Kalinichenko & Christochevsky in their book *Analytical Survey Digital Libraries in Education*. These are: be driven by educational and scientific needs and be accessible to all.

1.2.3 Building a Digital Library

Several open-source software were analyzed for building a Digital Library such as: Calibre, Moodle Portable, DSpace, Greenstone, etc.

Calibre is a comprehensive free and open-source tool that is used to manage e-library and to convert books to multiple formats. (Chathurvedula, 2016) According to this author, "For digital music, which also deals with multiple format issues and large libraries, there are programs like iTunes. For e-books, the equivalent is Calibre, a comprehensive free and open-source tool."

Consequently, this software is not suitable for the research work since the DLELII is aimed at a language course, it should support more files such as mp3 and video. Unfortunately, Calibre is designed to create a library of e-books only. Another reason is that this program is not widely used in education, as a result, it does not accomplish the main goals for the improvement of the teaching and learning process.

Another software analyzed is DSpace. According to the DSpace Foundation (2002-2009), "it is an open source software platform that enables organizations to capture and describe digital material using a submission workflow module, or a variety of programmatic ingest options, to distribute organization's digital assets over the web through a search and retrieval system and to preserve digital assets over the long term."

Despite its wide use for thesis and institutional publications, it can only be accessed through the web. Therefore, it is not suitable for the target in this study,

since the purpose of the researcher is to provide a Digital Library that can be portable and accessible everywhere.

Hence, the software selected by the author of this diploma paper was Greenstone Digital Library software(GSDL), version 3.07. According to Ian H. Witten and David Bainbridge (2003) it is a fully operational, flexible and comprehensive system that allows the user to create or modify a Digital Library. The GSDL allows the building and presentation of information collections. It provides an effective full-text searching and metadata-based browsing facilities that are attractive and easy to use.

Greenstone is produced by the New Zealand Digital Library Project at the University of Waikato, and distributed as open source, multilingual software in cooperation with UNESCO and the Human Info NGO. The dissemination of educational, scientific and cultural information, and particularly its availability in developing countries, is central to UNESCO's goals, and appropriate, accessible technology such as Greenstone is seen as a vital tool in this context. (Witten & Bainbridge, Creating Digital Library Collections with Greenstone, 2005) Therefore, this software is widely deployed by the UNESCO's Information of All Program as an initiative to spread the possibility of creating digital libraries around the world in a less complex way.

Witten & Bainbridge also stated that the aim of the GSDL software is to enable users, particularly in universities, libraries, and other public service institutions throughout the world, to build their own digital library collections in the fields of education, science and culture. UNESCO hopes this will encourage the effective deployment of digital libraries to share information and, where appropriate, place it in the public domain. The key points of Greenstone include:

- ☐ Design and construction of collections.
- ☐ Distributed on the web and/or removable media.
- ☐ Customized structure depending on available metadata.
- ☐ End-user collection-building interface for librarians.
- ☐ Reader and librarian interfaces in many languages.
- ☐ Multiplatform operation.

This software is widely used worldwide for educational purposes. There have been many universities which have used it for the improvement of the teaching and learning process. (Witten & Bainbridge 2005) For instance: Association of Indian

Labour Historians, Delhi Auburn University, Alabama; California University at Riverside; Hawaiian Electronic Library; Illinois Wesleyan University; Indian Institute of Management; Mari El Republic, Russia; National Centre for Science Information, Bangalore, India; Netherlands Institute for Scientific Information Services; Peking University Digital Library; Philippine Research Education and Government Information Network; Vimercate Public Library, Milan, Italy and others.

UN agencies with an interest in Greenstone include UNESCO, Paris (Sponsors distribution of the Greenstone software as part of its Information for All program), Food and Agriculture Organization (FAO), Rome (their Information Management Resource Kit uses Greenstone as the (only) example of digital library software in the Digitization and digital libraries self-instructional module), Institute for Information Technology in Education (IITE), Moscow (have commissioned an extensive course on Digital libraries in education that uses Greenstone for all the practical work), United Nations University (UNU), Japan (two CD-ROM collections of UNU material have been produced).

As it can be seen from above, the Greenstone is meant for non-specialist users. It allows the creation of individual collections which can be either portable or distributed in the web. They can then be run as separate repositories on computers without having the software installed. (Witten, 2005) Furthermore, it has an interactive interface which is feasible for the users and it provides several features to support files formats such as multimedia, html and audio which are crucial for the improvement of the teaching and learning process in English for Academic Purposes courses. Consequently, these features make GSDL highly suitable for this diploma paper.

1.2.4 Using Digital Library in the educational field: function and purposes

Digital libraries are being created today for diverse communities and in different fields such as education, science, culture, development, health, governance and so on. These ICTs tools enable the creation, organization, maintenance, management, access to, sharing and preservation of digital document collections. Furthermore, they can accumulate locally produced collections of information or to build a repository of the scholarship of an organization.

In educational institutions, a DL proffers unique resources and bibliography through which the teaching and learning process can be easily implemented. "A DL

can offer teachers a feasible way to let students pursue their own interests within the bounds of the curriculum and without creating an enormous amount of extra work in providing students with materials to support their investigations.” (Wallace, Krajcik, & Soloway, 1996) In other words, self-study is properly introduced and developed through this application.

In relation to this matter, Omoniwa (2001) has posited that a DL is a cooperative and integrated strategy in order to facilitate a wide access of information with a main goal, the permanent improvement of the teaching and learning process. Its expansive and accurate system, provides users with the ability to access to remote or updated resources without any physical barriers. Hence, students and professors are able to retrieve and compile a wider range of precise information which differentiates this software from Internet.

Creating, capturing, and deploying a learning experience are all activities that can be conducted in the digital domain. These drive fundamental requirements for the application of digital libraries in education, and also define some of the most important roles they can play. (L. Marks et al, 1994)

According to Jie Suna and Bao-Zhong Yuanb (2012) the function of a Digital Library may be defined as the collection, storage and processing of vast information and knowledge into a systemic project through digitalization and the internet, while providing convenient and highly efficient retrieval and inquiry services. Furthermore, these authors mention other functions in their book “Development and Characteristic of Digital Library as a Library Branch”:

- (1) To provide friendly interface to users.
- (2) To avail network facilities.
- (3) To support library functions.
- (4) To enhance advanced search, access and retrieval of information.
- (5) To improve the library operations.
- (6) To enable one to perform searches that is not practical manually.
- (7) To protect owners of information.
- (8) To preserve unique collection through digitization.

Digital Libraries also provide access to large amounts of information wherever they are and whenever they need it, to primary information sources and support multimedia content along with text, Network accessibility on Intranet and Internet.

Knowing the purpose of a Digital Library is a key element when designing one. This knowledge provides the user with the appropriate tools to build a more complete and comprehensive software in order to offer a coherent organization of the collection and a convenient access to the information.

Dr Mayank Trivedi (2010) stated the following purposes:

- *Expedite the systematic development of procedures to collect, store, and organize, information in digital form.
- *Promote efficient delivery of information economically to all users.
- *Encourage co-operative efforts in research resource, computing, and communication networks.
- *Strengthen communication and collaboration between and among educational institutions. Take leadership role in the generation and dissemination of knowledge. DL offers greater opportunities for users to deposit information as well as to use information. Thus, in educational field, as the main purpose is to improve the teaching and learning process, students and teachers can easily be publishers and readers in digital libraries. (Maurer & Marchionini, 1995).

Similarly, Maurer & Marchionini (1995) added: "Professors and students not only bring digital library information into the classroom but move the products of the classroom out into the digital libraries. Students bring interesting and important information to class discussions and in many cases lead teachers and classmates to new electronic resources and tools. Teachers' increasingly will find themselves in the important roles of moderator and critic, modeling for students how to examine and compare points of view and look critically at information."

Consequently, when teachers adopt this new way of teaching through the use of a DL, the classroom becomes more student-centered. This is a broad teaching approach that as stated by Nanney (2004) is a heightened advantage over the traditional teacher-centered because it provides complementary activities, interactive in nature, enabling individuals to address their own learning interests and needs and move forward into increasingly complex levels of content to further their understanding and appreciate subject matter.

She also mentioned that "student-centered learning and instructional technology seem to fit together well as one approach to enhanced learning. The computer-enhanced environment supports the learning of self-regulation skills, active learning, and construction of knowledge so that individuals assume a greater

responsibility for their own learning.” It is important to highlight that the interaction this environment promotes in the language teaching and learning process can also provide collaboration and hence facilitates learning. So, the constructivist approach to learning is assumed.

As it can be seen above, digital libraries are an unprecedented resource that positively influence today’s classrooms. The teaching and learning process enhanced through the use of this tool offers a wider range of opportunities for both learners and teachers. Since a DL provides a student-centered environment, self-assessment and self-study increase student experience and skills to meet their own needs. Finally, there is a direct, organized and easy access to information which is focused mainly on the curriculum requirements.

For this reason, a DL could be a good methodological alternative to be implemented in the foreign language teaching and learning process, where so many resources are being introduced day by day with the aim to provide a more organized learning environment to develop language skills.

1.3 English for Academic Purposes. Theoretical considerations.

In this globalized planet, the most convenient way to interact with others is through languages, specifically English, that is considered the international language for communication. It is widely learned as a second language and is an official language of the European Union, many Commonwealth countries and the United Nations, as well as in many world organizations.

It is thought that the dominance of English as an international language is because it has the greatest number of native speakers (NSs). However, this is not the case. According to The World Almanac and Book of Facts (1998), English is only the fourth language in the world in terms of the numbers who speak it as their first language. Nonetheless, English is by far the most popular language to learn as a second or foreign language.

Why is it so important to learn then? The first reason is its economic strength. As Graddol (1997) points out, in order to conduct trade, someone is likely to be more successful if one speaks the language of the customer. In terms of economic strength, the countries where English is the first language are by far the richest. Furthermore, Flowerdew & Peacock (2001) added that nonnative speakers want to learn this language in order to gain access to more technology and knowledge.

Finally, English is the international language of research and academic dissemination and to have access to this material it is necessary to know the language and become familiar with the academic language style.

1.3.1 Defining English for Academic Purposes

During the 1950s and 1960s, Britain began to receive increasing numbers of international students funded by the British Council as part of the government policy of aid to developing countries. At the same time, this country was responding to the rapid growth of English as a common language for business and science in many countries, and there was an explosion of need for English teachers to deliver language teaching in-country at fairly low levels. English for Specific Purposes (ESP) seemed the answer in the second context, while English for Academic Purposes (EAP) seemed the answer for the minority of these language learners who progressed to study in Britain. (Hamp-Lyons, 2011)

EAP has evolved rapidly over the past twenty years or so. From humble beginnings as a relatively fringe branch of ESP in the early 1980s, it is today a major force in English language teaching and research around the world. Drawing its strength from a variety of theories and a commitment to research-based language education, EAP has expanded with the growth of universities in many countries and increasing numbers of international students undertaking tertiary studies in English. As a result, EAP is now situated at the front line of both theory development and innovative practice in teaching English as a second foreign language. (Hyland, 2006)

Since it has been given profound importance to EAP nowadays, numerous academics have proposed their own definitions towards this matter, emphasizing in what they consider to be most relevant. The first definition described in this diploma paper was given by R. Jordan (1997) and reintroduced by J. Flowerdew and Peacock (2001):

“EAP is usually defined as teaching English with the aim of assisting learners’ study or research in that language.”

Even though many academics referred to the previous concept in their works, the author of this diploma paper considers that it is too concise for this current research. There is no reference to the skills EAP is aimed to develop or the

academic context in which it should be taught, both elements are the key to differentiate EAP from ESP or General English.

Academic English, according to Stephen et al (2000), is the language people use to communicate outside of and unrelated to any certain context. People describe and manipulate abstract ideas, analyze their thoughts and solve problems; the context provides few or no clues about what the communication means. In Gersten et al (2007) point out that Academic English is the language of school-based learning and extended, reasoned discourse.

The previous definitions altogether fit properly in the content of this research. They are exhaustive and comprehensive, since they refer to the modern society needs and demands and provide a clear explanation of the academic context in which EAP takes place. Furthermore, the concepts succeed to capture the features explained by Hyland (2006): “EAP seeks to understand and engage learners in a critical understanding of the increasingly varied contexts and practices of academic communication.”

On the other hand, EAP can be divided into different criteria depending on the proficiency level students should acquire. One of the most important ones in order to succeed in an academic context is C1 level, which is also known as Advanced level. This qualification is described by the Council of Europe in *The Common European Framework of Reference* (2001) which is currently approved in many countries around the world, especially in Europe.

The Common European Framework is the foundation for the design of syllabuses, curriculum guidelines, examinations, textbooks, etc. across Europe. It describes in a comprehensive way the main goals that learners should achieve when using a language for communication and what knowledge and skills they have to develop so as to be able to act effectively. The description also covers the cultural context in which language is set. (CEFR,2001)

1.3.2 Features and Purposes of Advanced EAP

The world is currently changing, consequently, education has to modify its methods in order to face today's challenges in society. EAP has also suffered transformations to meet the evolving needs. Andy Gillett (2011), a well-known author in this field, refers to the most suitable EAP aspects for the XXI Century. According to him, the main features of English for Academic Purposes in general are:

- Students should be able to use English in their professional or academic lives.
- Close attention should be paid to the learners' aims and what they are working on, studying or planning to study.
- Learners will need linguistic tasks, including language and practices.
- Learners should succeed in their aims. For example, they need to be able to understand their fellow students and textbooks and obtain good marks for assignments and examinations.
- EAP lecturer or course designers' task, then, is to find out the learners' needs, what they have to do in their academic work or courses, and help them to do this better in the time available.

Concisely, Gillett refers to EAP as a language approach based on the learners' basic needs for succeeding in academic environments. He also mentions the target needs that characterize the EAP language programs approach:

1. Use of the target language: Students should be able to use language in the following situations: lectures, seminars, tutorials, group projects, practical sessions, private study and examinations. In these situations, the language skills needed would include reading, writing, speaking and listening.
2. Knowledge of the language that is used in these skills in the students' specific subject areas is necessary and is an essential component of EAP courses.
3. EGAP/ESAP: English for General Academic Purposes - deals with the language and practices common to all EAP students, whereas ESAP - English for Specific Academic Purposes - is concerned with the specific needs of students in particular disciplines.
4. Culture and intercultural awareness. Knowledge of the academic culture is necessarily part of an EAP course and students and other learners need to be aware of the differences between their own academic cultures and the culture where they are studying.
5. EAP/Study skills. The main objective of EAP courses is to teach the language, both general academic language and subject specific language as well as language related practices such as summarizing and writing introductions. The language of the learners' academic subject and language related study skills will form the main component of the EAP skills classes.

EAP as a whole, aims at capturing 'thicker' descriptions of language use in the academy at all age and proficiency levels, incorporating and often going beyond

immediate communicative contexts to understand the nature of disciplinary knowledge itself. It employs a range of interdisciplinary influences for its research methods, theories and practices to provide insights into the structures and meanings of spoken, written, visual and electronic academic texts, into the demands placed by academic contexts on communicative behaviors, and into the pedagogic practices by which these behaviors can be developed.

It is, in short, a specialized English language teaching grounded in the social, cognitive and linguistic demands of academic target situations, providing focused instruction informed by an understanding of texts and the constraints of academic contexts. (Flowerdew, 2001)

According to Council of Europe in *The Common European Framework of Reference* (2001), the goal of advanced Academic English is for students to understand the main ideas of complex texts on both concrete and abstract topics, including technical discussions in the field of specialization. They should also interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party; produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.

Furthermore, in a more academic environment, students should be able to understand a wide range of demanding, longer texts, and recognize implicit meaning. They express him/herself fluently and spontaneously without much obvious searching for expressions. Use language flexibly and effectively for social, academic and professional purposes. They can produce clear, well-structured, detailed text on complex subjects, showing controlled use of organizational patterns, connectors and cohesive devices. (Council of Europe, 2001)

1.4 Implementation of a Digital Library in the EAP teaching and learning process

There is a considerable need to provide a wide variety of bibliography in order to fulfill the main goals mentioned before. Therefore, a DL has the potential to support this in the language teaching and learning. Although the Internet at large is widely used for language education, it has critical disadvantages that can be overcome in a more controlled environment.

A Digital Library in EAP classroom would be an integrator space that will allow students to quickly access to an amount of resources and information services specialized in English for Academic Purposes, available in the university environment. Being a main source of organized and accessible information provides students and professors with an easy access to bibliography without losing track of their main purpose. The language teaching and learning processes encompasses and requires the use of authentic language multimedia and multimodal materials such as text, audio, video and images. The Common European Framework of Reference for Languages: Learning, Teaching, Assessment promotes the linguistic diversity within the European Union. Additionally, it supports the use of ICTs as networks and digital tools at the service of teaching and learning foreign languages. In this context, the use of digital libraries becomes a key factor.

According to Shaoqun Wu and Ian H. Witten (2006), digital libraries can serve many roles in language education. First, they provide linguistic resources: in the classroom, text, pictures, models, audio, and video are used as material for teaching. Edge, J. (1993) summarizes some kinds of language resources: published, authentic and teacher-produced, and digital libraries allow teachers to build collections of each kind.

Teachers can build collections of materials presented in diverse media—text, images, audio, video, and maps. Secondly, digital libraries can bring teachers and learners together. Forums, discussion, boards, electronic journals and chat programs can be incorporated to create a community where teachers share their thoughts, tips and lesson plans; learners meet their peers and exchange ideas; and teachers organize collaborative task-based, content-based projects. This community is especially meaningful for language learning because it embeds learners in an authentic social environment, and also integrates the various skills of learning and use.

As Vygotsky, L.S. (1978) postulated, true learning involves socialization, where students internalize language by collaborating on common activities and sharing the means of communicating information.

Finally, DL can provide students with activities, references and tools. Language activities may include courses, practice exercises, and instructional programs. In traditional libraries students find reference works: dictionaries,

thesauri, grammar, tutorials, books of synonyms, antonyms and collocations, and so on. Equivalent resources in digital libraries can be used as the basis of stimulating educational games.

Another advantage would be that a DL can store several books and files in a limited space. It can be used through the World Wide Web, hence, students can download and store the information in portable devices. Digital library enables the creation, organization, maintenance, management, access, sharing and preservation of digital document collections. It may be also to accumulate locally produced collections of information.

DL also allows students to engage in a host of activities that are difficult or impossible to do. It can enhance the quality of education in several ways, by increasing learner's motivation and engagement, by facilitating the acquisition of basic skills, and enhancing teacher training. The Digital Library is also a transformational tool which, when used appropriately, can promote the shift to a learner centered environment. It enables new ways of teaching and learning rather than simply allow teachers and students to do what they have done before in a better way. The DL has an impact on what students should learn and it plays a major role on how the students should learn to learn. Along with a shift of curricula from "content-centered" to "competence-based".

The adoption and use of the Digital Library in EAP classrooms has a positive impact on teaching, learning, and research not only while they are students but also once they become professionals. Moreover, it will increase flexibility so that learners can access the education regardless of time and geographical barriers. It can influence the way students are taught and how they learn. It would provide a rich environment and motivation for the teaching and learning process by offering new possibilities for learners and teachers. These possibilities can have an impact on student performance and achievement. Similarly, wider availability of best practices and best course material by means of ICTs can foster better teaching and systematize the four academic language skills: Reading, Listening, Writing and Speaking.

1.5 Partial Conclusions:

This chapter was devoted to give a comprehensive bibliographical review on the definitions, main features, purposes and role of Information and Communication

Technologies, Digital Libraries and English for Academic Purposes. Hence, when analyzing the bibliography, it was concluded that new challenges bring new needs in academic fields, therefore, EAP is also modified and improved in order to fulfil the main goals. Applying a DL in these classrooms may foster the improvement of the teaching and learning process and the development of the four basic language academic skills by offering a wider and more reliable access to the information.



CHAPTER II

CHAPTER II. RESEARCH METHODOLOGICAL APPROACH AND NEEDS ANALYSIS IN THE CONTEXT OF THE SUBJECT ENGLISH LANGUAGE II

2.1 Research methodological approach and stages of the research

Taking into consideration the interests, circumstances of the scenario, and the participants of the research, the use of a qualitative methodology was considered to be the most suitable for attaining the research purposes. A descriptive research was developed to attain the description of the situation concerning the basic and complementary bibliography of the subject English Language II.

This Chapter will provide the necessary elements that describe the research process and the methods used for collecting and processing data to achieve the outcomes. The results to be presented here will unveil the limitations regarding the basic and complementary bibliography of the subject English Language II and the issues concerning the organization of the information.

The research was divided into three main stages:

During the first stage, the attention was focused on the construction of a theoretical background to systematize the main concepts and their relationships. The main definitions such as Information and Communication Technologies, Digital Library and their impact not only on the world but also on education, and specifically in the teaching and learning process of English for Academic Purposes were analyzed. Therefore, a bibliographic review was developed.

The second stage was devoted to the needs analysis concerning the bibliography of the subject English Language II and also the availability of ICTs resources in the research context for both professors and students of the second year of English Language with a second foreign language: French. Its main purpose was to accomplish the second specific objective of the research project. In this stage the research instruments for collecting information were designed and applied. Then the analysis of the data obtained was carried out using content analysis together with some other methods from the statistical and mathematical level. Finally, the results were stated evidencing the need for the proposal of the Digital Library.

The third stage was devoted to the process of designing the Digital Library for English Language II. It was based on the principles, features and technological resources for the construction of the DL described in the theoretical chapter. Finally, the proposal was assessed using the specialists' criteria.

2.2 Description of the sample and research methods used

The research was carried out in the context of the course English Language with a second foreign language: French at the Universidad Central «Marta Abreu» de Las Villas. This course is intended for students to solve real-life problems concerning interpreting and translation of texts and the teaching and learning process of English and French languages. It is studied for six years and the students graduate with a wide professional profile: professors, translators and interpreters.

The setting selected for this study is the subject English Language II. In selecting the participants, an intentional and reasoned sampling criterion was employed. The sample was composed by 21 students of second year because they were currently involved in the subject English Language II. In addition, 9 professors also participated, that included the main professor of the subject, others who had taught the subject or had interdisciplinary relationships with English Language II and the department authorities. Therefore, there were 30 participants in total.

The researcher took into account the following criteria to choose the sample:

For professor	For students
Academic year: the principal professor in charge of teaching English Language II in the academic course English Language with a second foreign language: French.	Academic year: The second year students who are currently taking the subject English Language II.
Willingness to participate: the participants were willing to cooperate with the research process based on the awareness of the improvement of the teaching and learning process of the subject English Language II.	Willingness to participate: the participants were willing to cooperate with the research process based mainly on the awareness of the possible benefits this type of research could bring about.
Experience in teaching EAP: those who have taught the subject.	
Interdisciplinary relationships with English Language II: those who teach subjects which contents are closely related with English Language II (Interpreting and Translation).	

The main objectives of the research as well as the impact were explained to the participants. The research work had all the support and collaboration from the department authorities and staff in providing all the necessary information in respect to the topic.

In this research work, two main dimensions were identified:

- The systematization of the bibliography in the subject English Language II.
- The design of the Digital Library for the subject English Language II.

2.3 Results Analysis

In order to develop this research work, several methods and instruments for collecting data were used. They were stated in the introductory section of the diploma paper. As it was mainly a qualitative research, for the results analysis, the method of content analysis was used accompanied with the interpretation of the data and verbalizations of the participants supporting the results. Then, in this section, a descriptive analysis is carried out for each of the empirical methods.

2.3.1 Document Analysis

Five documents were analyzed during the investigation process: Curriculum “D”, the Syllabus of English Language discipline, the Syllabus of English Language II, Scientific and Technological Information Strategy and Computer Strategy of the course English Language with a second foreign language: French.

-The Curriculum D was analyzed in order to know the main objectives of the academic course English Language with a second foreign language: French, alumni profile, importance of the English Language discipline and the subject English Language II.

-Secondly, the Syllabus of the English Language Discipline in order to identify the main features, objectives and the place of English Language II on it.

-Thirdly, the Syllabus of the subject English Language II to analyze the objectives, contents, assessment criteria and the consistency of the general objectives with the descriptors of the communicative performance for a C1 level of the CEFR.

-Fourthly, the Technological and Scientific Information Strategy to find out the objectives of this strategy for students' professional growth since the proposal in this research work was aimed at systematizing the bibliography of the subject English Language II through a Digital Library.

-Finally, the Computer Strategy to analyze what is the level that second year students are supposed to have in respect to computer skills for them to manage the information through an ICTs proposal.

Results of the analysis of the Curriculum “D”:

The Curriculum of the course is the latest modification of the study curricula, that includes 11 disciplines, from which two are considered to be basic: English Language and French. The main descriptors analyzed were the general objective for the academic course, exercise of the profession, fields and areas of action.

The general objective states that the graduates must be able to solve problems related to the interpretation of texts in English or the second foreign language: French into Spanish and with the teaching and learning process of foreign languages in higher education taking into account ethical, economic and environmental considerations.

They have to be mediators in the communication between Spanish speakers and non-Spanish speakers, from English or the second foreign language to Spanish and vice versa and be able to teach English or the second language. Their professional performance will be mainly in areas of tourism, international events and foreign affairs, etc.

Results of the analysis of the English Language Discipline Syllabus:

English Language Discipline is considered the backbone of this academic program. As general objectives, students should be able to use English language as a mean of communication and working tool; to deal with written and oral texts in English language through different activities; to assess different life and cultural expressions of the English Speaking countries, based on the materialistic and dialectic approach as well as to acquire study skills and self-preparation in the knowledge and system of the English language.

English Language discipline integrates the contents and skills that students will need for succeeding in the rest of the disciplines of the course curriculum. Therefore, the analysis of its Syllabus is important in order to determine the impact English Language II (as part of the discipline) has on future professionals.

Syllabus of the subject English Language II

English Language II is considered to be one of the basic subjects in the English Language Discipline. It is the ground of this research work. This subject is taught in second year of the academic course throughout a whole year. The subject is

delivered in 256 hours mainly of practical lessons and 48 hours of assessment divided into 35 weeks.

According to the objectives of the Syllabus students should integrate a verbal and non-verbal communication in their linguistic, pragmatic and sociolinguistic components in order to be able to analyze and produce texts in the academic communication context.

The assessment process includes the four language skills: Listening, Reading, Speaking and Writing. It is carried out in the form of systematic evaluation, partial and a final exam. The assessment criteria take into account creativity, language use, accuracy and spontaneity according to the proficiency level C1 aimed for this subject. This level is described by the CEFR, the International English Language Testing System (IELTS) and the Certificate in Advanced English (CAE).

Therefore, the bibliography used for the students to achieve a C1 level in this subject is taken from several sources including the ones mentioned before, adapted to the students' needs and subject conditions. The basic bibliography in the Syllabus is "Focus on IELTS" by Sue O'Connell and "Vocabulary for IELTS" by Pauline Cullen.

To sum up, the analysis of this document allowed to determine the place English Language II occupies in the discipline and in respect to other disciplines of the curriculum as a ground knowledge for interpreting, translation and teaching.

Analysis of the Scientific and Technological Information Strategy

In this document, the main objectives of the academic course in respect to the scientific and technological information are given as well as the derivation of the specific objectives for each year. According to this strategy, university students should be able to manage scientific and technological information for succeeding in their studies. Since scientific and technological information is constantly changing in this globalized world, students should be updated about the latest advances in their area of knowledge.

The main objectives of the course in this strategy are aimed to use the scientific and technical information to generate new information in order to actively contribute to the solution of problems in each alumni profile based on the scientific method; to be able to handle traditional and new computerized techniques concerning bibliographic search and to carry out research based on reliable sources of information.

For the second year students, the specific objectives are: to consult the textbook, complementary bibliography and technical newspaper publications systematically; to use ICTs in order to access information through Internet, Local Network, CD-ROM or email.

This document also highlights the importance of using the materials in the Local Network as a tool for learning, writing research projects (in English or French languages) and doing automatized literature search.

Analysis of the Computer Strategy:

The general objective of the strategy is to develop the students' computer skills to prepare a more competent professional. According to this strategy, it is crucial to master skills concerning the use of text processors, Microsoft Office, text tabs and email. It is also aimed at elaborating and using databases and surfing the web (Local Network or Internet) looking for information. This document highlights the importance of using professional software and tutorials related with the specialty as well as using information from servers and Remote Databases in the students' research component of the curriculum.

In the case of English Language II, the document states that students have at their disposal a folder with the bibliography elaborated by professors in the Local Network. Students should show a high command of the word processors, including automatized elaboration of summaries and table of contents.

In conclusion, a computer knowledge, specifically ICTs in general opens many doors to a wide range of resources and information. The subject English language II has most of the bibliography in digital form which means using a Digital Library as part of the computer strategy developed in this university, can be a positive and good solution to organize and systematize its bibliography.

2.3.2 Participant Observation

An observation guide was applied in order to analyze students' practices in respect to information management in the subject English Language II. (Appendix 1)

The following results were obtained:

- There is a computer lab in the faculty for the English Language with a second foreign language: French and Philology courses equipped with 19 computers and there are some tables available for those students who have personal computers.
- The connection can be achieved through the WIFI and network cable.

- Due to the limitations in the lab schedules, students cannot access to the information at any time.
- There is a folder in the local university network for the bibliography of the subject English Language II, divided into semesters and units.
- The bibliography of the subject in the local network is still insufficient: contains a textbook and a complementary book. There are also Mp3 files and some videos.
- The materials found in the subject folder are not organized in the four language skills which otherwise will facilitate students' self-study and the teaching and learning process.
- The main two books are in a printed version ("Focus on IELTS' by Sue O'Connell and "Vocabulary for IELTS" by Pauline Cullen) but students only have access to them during the lessons in the classroom. The printing is in black and white, which limits the interpretations of graphs and pictures.

2.3.3 Survey to the students

A survey was applied to 21 students with the purpose of finding out about the situation regarding the bibliography of the subject English Language II.

The questionnaire used for the survey (Appendix 2) consisted of 9 questions: dichotomous scale questions (Yes or No responses or Sufficient and Insufficient), multiple choice questions—delimited answers decided in advance. These types of questions are easier for the frequency analysis of the provided information and require less effort for the respondents. Also, open-ended questions were used in order to get a deeper insight on the respondents' opinions and suggestions.

Once data was collected in the research study, the next step involved the analysis of those data. Percentage as a relative frequency calculation was used to draw accurate results taking into account the different questions.

The first question of the survey was aimed to determine students' knowledge towards the bibliography of the subject English Language II, whether there was basic, complementary or both. Most of the students who represented 90% (19 students) of the total recognized that there is basic bibliography. However, it caught the researcher's attention the case of two respondents (10%) who considered that the existing bibliography was complementary. (See Table 1)

Bibliography in the form of a wide range of stimulating and exciting materials can be used to teach the concepts outlined in the curriculum to ensure that students

are actively involved in their learning. (Teaching and Learning Resources, 2017) Bibliography represents a fundamental element for the improvement of the teaching and learning process and it is also a tool that facilitates not only the individual study but also the independent work, which allows the systematic knowledge.

Bibliography of the Subject English Language II	Number of Students	%
Basic Bibliography	19	90
Complementary Bibliography	2	10
None of the previous ones	-	-

Table 1. The stage of the subject English Language II.

The second question was addressed to the characterization of the subject bibliography. The respondents were supposed to determine if it was sufficient (meaning that it covers the basic needs of the subject) or if it was insufficient (it does not cover the basic needs of the subject). As it can be seen in the pie graph 1 (Appendix 3), 95% of the respondents, agreed that the bibliography is not enough and only 5% considered that it is enough for the development of the teaching and learning process.

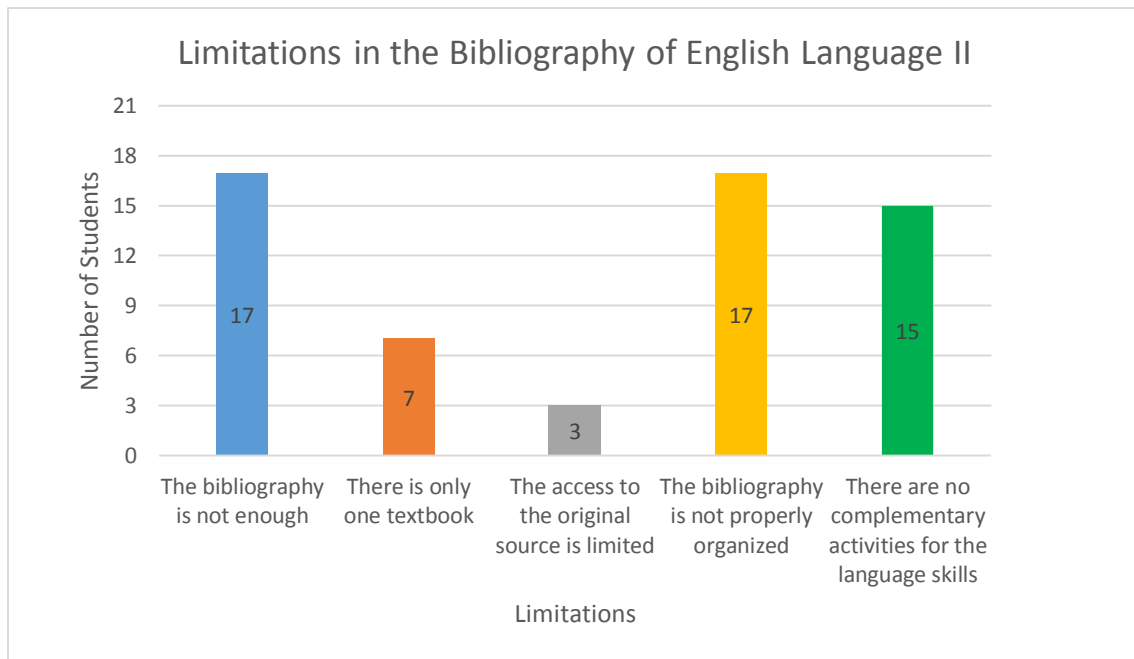
In the book *The Importance of Learning Materials in Teaching* (2016) "Teaching materials can support student learning and increase student success. Ideally, they will be tailored to the content in which they're being used, to the students in whose class they are being used, and the teacher. Teaching materials come in many shapes and sizes, but they all have in common the ability to support student learning."

The third question was asked in order to know about the students' access to the folder of the subject English Language II. Most of them (19 students) used the contents in the folder (90% of the sample) (See table 2, Appendix 4)

Nevertheless, through the answers of question 4, the researcher was able to determine that this folder did not satisfy the basic needs of bibliography in the subject English Language II. Only 5 % of the students considered that it was enough. (See table 2, Appendix 4)

These opinions are justified through the results of the fifth question (See Graph 2), which was addressed to determine the limitations in the bibliography of the folder. The most obvious trends on the graph showed similar results for two choices:

bibliography sufficiency and organization with 81% of the students. The activities to systematize different skills (Speaking, Writing, Listening, Reading) were also considered insufficient (72%).



Graph 2. Limitations of the bibliography in the subject English Language II.

The sixth question was addressed to determine if the weaknesses concerning the bibliography affect the students' motivation towards the subject English Language II.

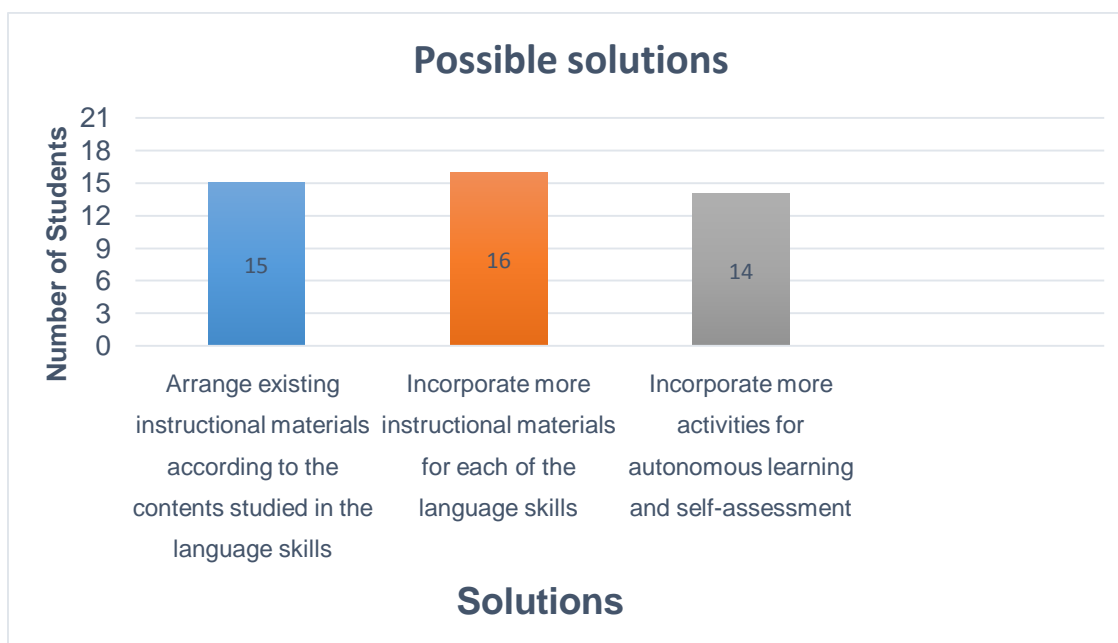
Most of the students, representing 95% of the sample considered that these shortages generate a lack of motivation towards English Language II. However, only one student considered that this did not affect him. (See Graph 3, Appendix 5)

In this case we are dealing with situational motivation which according to Hurst (2013), is defined as a phenomenon in which aspects of the immediate environment enhance motivation to learn particular things or behave in particular ways. This element is crucial in the development of different aspects such as individual work, autonomous learning and self-assessment.

Therefore, these opinions led the respondents to suggest some solutions for the shortages of the bibliography in the final question of the survey. A multiple choice question was used as well as an open question in order to identify if students had more opinions in respect to this. (See Graph 4)

In the first place, most of the students (80%) agreed to include more bibliography (from different sources) for each of the language skills (listening,

writing, speaking, reading). Secondly, to arrange existent bibliography according to the contents studied in each of the language skills (listening, writing, speaking, reading) (76%) and finally, to incorporate more activities for autonomous learning and self-assessment (from different sources) for each of the language skills (listening, writing, speaking, reading) (72%). Furthermore, students also made some suggestions such as: to incorporate Vocabulary, Grammar textbooks and workbooks.



Graph 4. Possible solutions to the limitations in the subject English Language II.

This survey in general, allowed the researcher to find out students' needs in the English Language II subject concerning the bibliography. The required bibliography is still insufficient and need some organization in respect to the four language skills. Consequently, it was a useful method that helped identify the shortages and the best solutions for this problem.

2.3.4 Interview to professors

An in-depth and structured interview was applied to the main professor of the subject English Language II, the professors of the English Language Department and the department authorities. Its main purpose was to know their opinions about the importance of EAP and English Language II as an interdisciplinary subject. Furthermore, professors were asked to offer suggestions concerning the instructional materials that could be included in the subject. (Appendix 6) The

interviewees were audio recorded and the interviews were transcribed for a detailed analysis of the information.

After the content analysis of the in-depth interview the resulting categories were the following:

1. Importance of English for Academic Purposes for the students' professional growth.
2. English for Academic Purposes relationship with the rest of the subjects (mainly Interpreting and Translation)
3. The impact of English for Academic Purposes on the command of specific vocabulary related with different genre and contents for Translation and Interpreting.
4. Opinions about the existing bibliography in the subject English Language II.

4.1 Suggestions for improvement.

In respect to the first category, all the professors agreed on the significance of EAP for students' success in the academic course in the sense of creating a linguistic basis mainly in the area of vocabulary and morphosyntactic resources. (See Table 4, Appendix 7) This verbalization illustrates the previous result:

“EAP allows students to succeed and acquire morphosyntactic resources which are crucial to broaden the vocabulary range to be used in any academic field.”

Indeed, Academic English offers a good access to a broad range of language, which allows fluent, spontaneous communication. It also provides a good command of a broad lexical repertoire allowing gaps to be readily overcome. (CEFR, 2001)

Concerning the second category, similar to the results given in the previous one, all the professors highlighted the role of EAP as a foundation for the process of translating and interpreting and they provided plenty of arguments on this question. (See Table 4, Appendix 7)

“If there is a lexical and syntactic knowledge which can be acquired through EAP, it will be easier for students to communicate the meaning and speech in interpreting”

Translators and interpreters are involved in transferring information from the source language to the target language. Chapman (2015) considers that keeping the meaning and the original message from the source text in the language translation process thanks to academic knowledge of the language becomes more of an art rather than a science. If there is a communication breakdown commerce breaks off, leading to billions of dollars in losses and lost opportunities. Here lies the importance of a good command of EAP for the translation and interpreting process.

In fact, students who are proficient in the Academic Language for these subject areas are much better equipped to acquire new knowledge through reading and listening, and to express this knowledge and their ideas through oral discussions, writing and test taking. (Willis, 2013)

The third category evidenced the influence of EAP on the contents and genre used for Interpreting and Translation. Most of the professors considered that it has a huge impact on the genre and contents of these subjects since EAP deals with some specific vocabulary related with these themes. (See Table 5, Appendix 8)

“The vocabulary range acquired through Academic English is crucial when dealing with newspapers, military and economic documents in Interpreting and Translation”

In this sense, Bailey (2007 cited by Willis, 2013) agrees that mastering Academic Language is a challenge for all students. It is knowing and being able to use general and content-specific vocabulary, specialized or complex grammatical structures — all for the purpose of acquiring new knowledge and skills, interacting about a topic, or imparting information to others.

The fourth category depended on the knowledge and experience professors had in the teaching of English Language II subject. In respect to the bibliography they agreed that the contents should be extended not only considering the textbooks published by the IELTS but also others related with academic language. Similarly to what students expressed in the survey, they also considered that some activities for developing the four language skills should be part of the bibliography. (See Table 5, Appendix 8)

“To complement the textbook –IELTS- with Complete Certificate in Advanced English”

“To introduce some tasks for writing skills since there are some topics students need to deal with that are not included in the IELTS textbooks like formal letter writing...”

See Table 6 (Appendix 9) for more examples illustrating the four categories.

The in-depth interview to the professors and department authorities provided the researcher with the main tools to determine the importance of English Language II as an EAP course and interdisciplinary subject. The interviews also complemented the information given by the students in the survey. They also showed that the faculty and the department have well-prepared and qualified staff able to identify their own strengths and weaknesses and act accordingly in order to improve the teaching and learning process of EAP.

2.4 Results of the needs analysis in the context of the subject English Language II

From the information obtained through the different research methods it was concluded that the bibliography included in the folder is still insufficient. It is considered that in terms of information availability is never enough, especially because we are living in a globalized world where new information emerges day by day and needs to be updated.

There are shortages regarding the access and quality of the existing bibliography for the subject English Language II. There are only two textbooks in digital and printed version.

Students and professors coincided that the bibliography was not properly organized and needed to be enlarged and complemented with some more tasks for developing the four language skills.

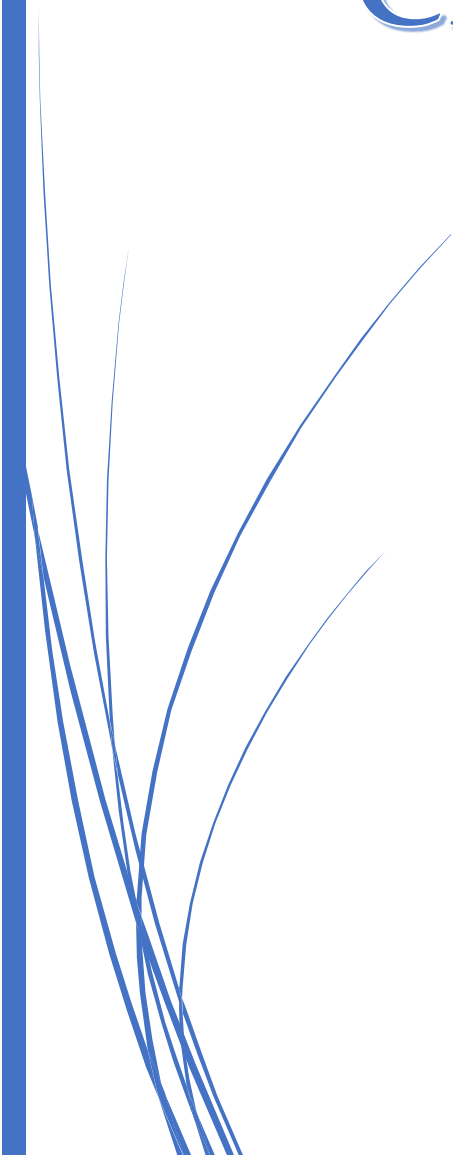
It was evidenced a need for new instructional materials, activities and the systematization of the existing information.

Professors stated the importance of EAP as a basis for other subjects from an interdisciplinary approach.

All regularities, resulting from the different research methods, proved the gap the author had empirically envisioned in this research work and revealed the limitations of the current bibliography in English Language II which led to the proposal of a Digital Library for attaining the research overall aim.

The next chapter will be devoted to the description of the Digital Library for English Language II and the process of its elaboration.

CHAPTER III



CHAPTER III: THE PROPOSAL OF THE DIGITAL LIBRARY FOR ENGLISH LANGUAGE II. THE ELABORATION PROCESS.

As it was presented in the introductory part of this report there was a problem related with the bibliography of the subject English Language II.

From the needs analysis presented in Chapter II, it was decided to design a Digital Library, which main purpose was to systematize the bibliography of the subject English Language II in order to meet students' needs and improve the teaching and learning process. Hence, the Digital Library for English Language II (DLELII) was elaborated taking into consideration the theoretical framework presented in Chapter I as well as the results of the needs analysis in Chapter II.

Since it was created for the systematization of the bibliography, the central focus was on the thorough selection of the sources and activities. The DLELII contents includes a basic bibliography for each unit planned in the syllabus divided into semesters, units and skills. It was taken from the textbook "Focus on IELTS" by Sue O' Connell, the "Complete CAE" by Guy-Brook Hart and Simon Haines, "Compact Advanced" by Peter May, "English Advanced Grammar in Use" by Martin Hewings, "Advanced Vocabulary in Use" by Michael McCarthy and Felicity O' Dell, and other sources; as well as complementary bibliography and activities designed to develop each language skill taken from other books and reliable sources from Internet.

In respect to the layout, other features like color, structure, interactivity and search and retrieval were taken into account to create an attractive interface easy to navigate through. The DLELII is portable so it can be accessed from any computer without being connected to the network.

3.1 The process of building the Digital Library for English Language II (DLELII)

After having a clear concept of a Digital Library, the author followed some steps in order to build the DLELII:

1. The principles of a DL were analyzed from the theoretical point of view and then applied to the specific purposes of this research.
2. The existing open-source software for the elaboration of the Digital Library were analyzed to select the most suitable one regarding the purposes of the research.
3. The main features were taken into account for the design of the DLELII.

4. The contents and tasks for the DLELII were searched and selected from different reliable sources and were consulted with the main professor of the subject.
5. The metadata was used to organize and catalogue the materials by title, author, publisher, contributor, keywords, format and date.
6. Although it is easy to navigate through the contents of the DLELII, a user's guide was designed for those who might have difficulties using the software. (Appendix 10)

3.1.2 Selecting the software for building the DLELII

Several open-source software were analyzed in order to determine the most suitable one for the design of the DLELII. Finally, it was concluded that Greenstone Digital Library software (GSDL) was the adequate for this research.

The reasons for the choice are many:

- The GSDL is meant for non-specialist users, which eases the creation and use of the collection.
- The GSDL features facilitate the users' access to the bibliography and activities whenever and wherever they want.
- The GSDL interactive interface gives the possibility to support many formats such as pdf, doc, docx, html, audio and media.
- The GSDL interface offers a feasible access to the information and facilitates the systematization of the bibliography in the subject English Language II.

Overall, these features make GSDL particularly suitable for this research work.

3.1.3 Principles applied in the design of the DLELII

The principles used for designing the DLELII were those described mainly by Dong & Agogino (2001) and the ones mentioned by Kalinichenko & Christochevsky in their book *Analytical Survey Digital Libraries in Education*. Among them:

1. Be driven by educational and scientific needs

The content of DLELII responded mainly to the basic needs resulting in Chapter II. Therefore, scientific and educational needs were taken into account in order to develop the Digital Library. Consequently, the main purpose of the DLELII is to develop and systematize students' skills through different activities and access to the basic and complementary bibliography. Its content is essential, since it provides general and specific information which may be used for educational purposes.

Hence, it could be the foundation of knowledge for other subjects and improve searching and reading skills, which are the cornerstone of any scientific research.

2. Be accessible to all

DLELII was designed with a coherent and comprehensive view in order to provide students and professors with the basic and complementary bibliography of the subject English Language II. Therefore, the materials included in this program are available to all users with a feasible and quick access. Moreover, DLELII homepage offers a search option, which allows the users to look for specific data and documents instead of navigating throughout the whole software to find them.

3. Information Organization

The content is organized taking into account students' needs and Syllabus structure in order to facilitate the access to the resources. Users can easily find and manipulate all the information which is divided into two Semesters, 15 Units and different language skills (Reading, Listening, Speaking, Writing, Grammar and Vocabulary). This structure facilitates self-study and provide learners with opportunities for autonomous learning.

4. Information Labeling

To label resources, some pedagogical identifiers were taken into account: the proficiency level C1 students should achieve at the end of the subject, the performance descriptors for each of the four skills at the level of C1 through CEFR, the objectives, the teaching aids, the assessment procedures. The effectiveness of the learning resource hinges on the type of learning undertaken, in this case, the emphasis is placed on the autonomous learning for independent study.

5. Information Navigation

Search features in DLELII were created taking into account the development of individual learning goals. It is feasible to all users since they may find the information depending on the skill and knowledge they want to improve. The navigation design for this DL guides students to the bibliography they need and also develops the ability to explore in the search of more materials.

6. Information Search

Instructional materials and activities are searchable from any webpage in the Digital Library. The software offers many options for searching through title, author or even through the keywords in each document.

7. Methodology

This information design methodology follows along the principles of “contextual design”, reviewing the users’ needs and suggestions carried out in the needs analysis in Chapter II.

3.1.4 Characteristics of the DLELII

From the main characteristics described in the theoretical framework, the following were applied for the DLELII:

1. Color

For the design of the DL, the researcher took into account the color psychology. Therefore, physiological and psychological effects were taken into consideration. Green was used as a background color in order to enhance learning and improve comprehension. It was also meant to create a balance and a relaxed learning environment. Some of the qualities that lie behind green color are: nature, nurturing, instruction, education and calm. Green is great for counseling, libraries, history & social studies spaces. Contrast colors like black and white were used for readability since they are easier to read in papers and computer screens.

2. Structure of the Digital Library

The information in the DLELII was properly and effectively organized. Its architectural designed was developed taking into consideration the Syllabus, learners’ needs related to the C1 level described by CEFR. Therefore, this information is accessible in almost every possible manner. Similarly, it enables a dynamic use of several materials such as texts, graphs, web pages, audio and media aimed to fulfil the main objectives of the English Language II Syllabus.

The architecture was also developed taking into account the units and skills stated in the Syllabus. Consequently, it allows students to easily access to the bibliography and activities related to each lesson.

2.1 Home page

The home page of the DLELII is the first web page displayed in the Digital Library. It has a menu with different options depending on the users’s needs. It provides the title of the program and its description. The latter one informs the users with general information about the software: to whom the software is addressed, its main purposes, the contents, etc.

Furthermore, on the right, there is a section where students or professors may log in to access the information in the Digital Library. Behind this section, users may find the search tools in case they want to search for specific documents. Finally, it uses four Browsers that provide the bibliography needed for the subject. (Syllabus, Semester 1, Semester 2, Skills). (See Figure 1) Two semesters are included because English Language II is a whole academic year subject.

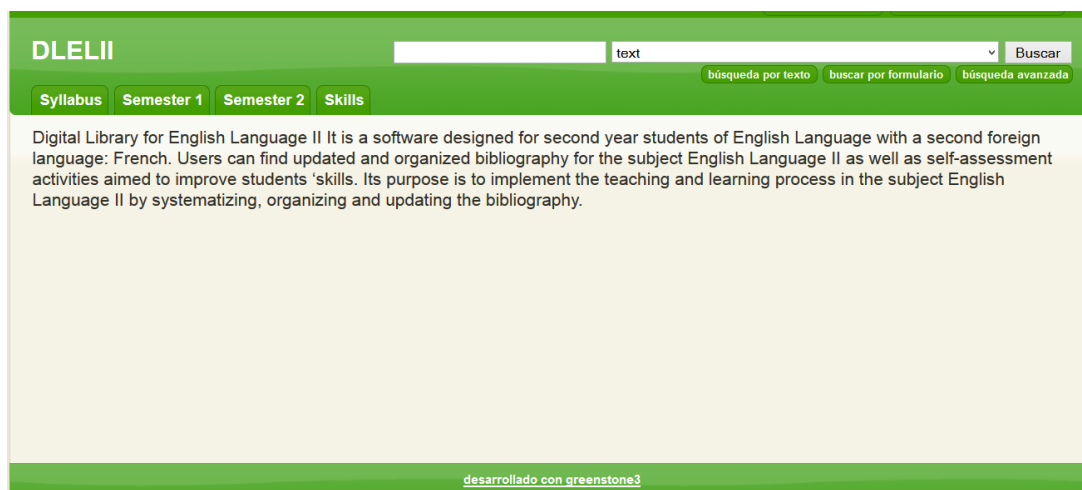


Fig. 1 DLELII Homepage

Firstly, the Syllabus Browser, as its name says, contains the main document of the subject. Therefore, the user can find general information related to the English Language II as well as the units in each semester, number of teaching and practice hours, evaluations and bibliography. They can also find the objectives, topics and main contents of units and skills. Secondly, in the Semester 1 Browser users can find the units from 1 to 9 described in the Syllabus of the subject English Language II. Semester 2 Browser, which shows the units from 10 to 21 of the subject. Finally, Skills Browser which organizes the materials in skills.

3. Interactivity

The DLELII provides adequate and immediate interactions among the users (students and professors) and the software beyond information search. Most of the Interactivity attributes given by Anita Coleman in her work *Interactional Digital Libraries: Uses and Users* and that were quoted in the theoretical framework of this research, are included in this project. The tasks included in the software contain the possible answers which provide students some feedback. This feature might increase the level of motivation as it involves task complexity and a feedback on the students' performance. Each unit and language skill include several tasks. This gives students a feedback of their knowledge and skills.

4. Search and retrieval

Searching for information is a key element in the teaching and learning process. It is really useful in assignments and individual work in general. The DLELII provides full-text indexes from the document text with flexible browsing facilities. Consequently, it enables searching by author, title, date, keywords, contributor, and publisher. Users can search for particular words, phrases depending on their needs.

The results are ordered according to how important they are to the query. This provides a quick access to resources and specific documents. A simple search is always available in the software, which facilitates the access to a precise document or data. Users can browse interactively around lists, and hierarchical structures within a single collection, across collections or groups of collections. (Fig.2)

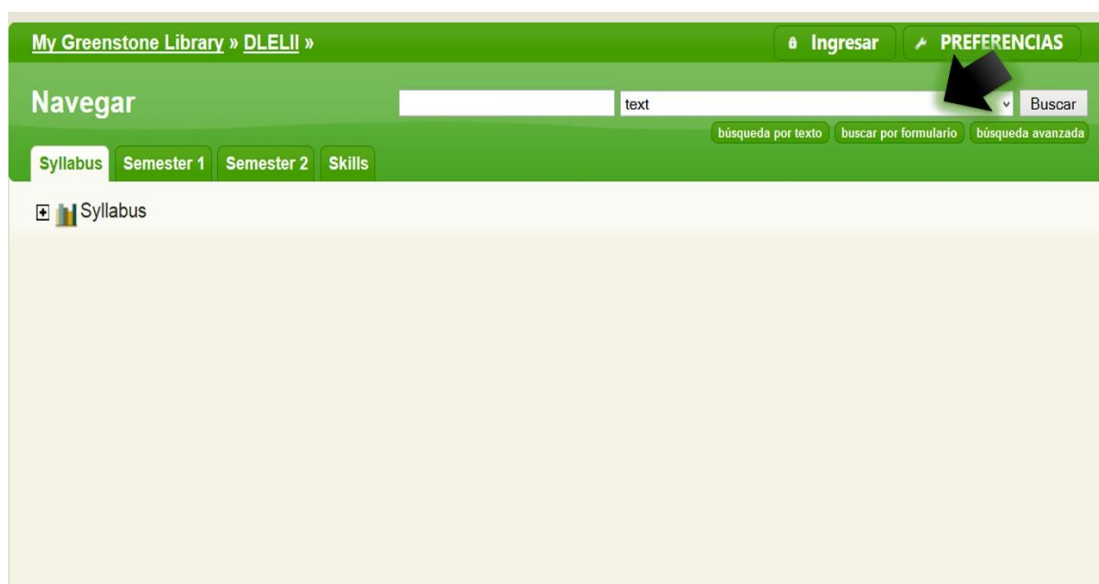


Fig. 2 Search Features

5. Contents of the DLELII

The DLELII provides a wide variety of materials, which are available in the form of collections. The content structure is simple, basic and easy to access, consequently, users can find the materials quickly due to its organization in semesters, units and skills. It is specific for the C1 proficiency level described by the Common European Framework of Reference.

The selection of the materials was made using the following criteria:

- Consistency: in respect to the Syllabus and the proficiency level.
- Variety of sources: books, tasks, grammar and vocabulary books, encyclopedia.
- Variety of input: audio, video, films, web pages.

-Date of publication: from the 2000s onwards.

-Reliability: taken from well-known authors and publishers in the area of EAP.

The available data in the DLELII includes the following materials: books, tasks, audio, and video.

* Books: Textbooks, Workbooks, Grammar, Vocabulary. They are scanned versions downloaded from Internet. For instance, “Complete Certificate in Advance English” by Guy Brook-Hart and Simon Haines (2009).

* Tasks: they can be found in several formats such as pdf, word document and html. The user can access to them in any unit and skill to determine whether they are improving or not in specific topics. They were taken from the IELTS model tasks for the IELTS and other reliable sources for C1 language level available in Internet. Here is an example of one of the tasks for writing skill in the Unit 11 You Live and Learn.

You have been discussing in class the importance of learning foreign languages. Write an academic essay for your teacher about the following topic:

Some experts believe that it is better for children to begin learning a foreign language at primary school rather than secondary school. Do the advantages of this outweigh the disadvantages?

Give reasons for your answer and include any relevant examples from your own knowledge or experience. Write at least 250 words

* Video: It was used as a teaching aid in order to strengthen the knowledge acquisition and students motivation. For instance, in Unit 10 Hazard Warning, students can find videos and films related to natural disasters such as “Dormant Volcanoes”, and the films: “The Day After Tomorrow” and “2012”.

Videos stimulate and facilitate the improvement of authentic language input as well as the acquisition of new knowledge of a specific academic field. Students are able to listen to native speakers in particular areas of study such as nature, sports, health, etc. which is crucial in the study of culture and academic topics. (Ferlazzo, 2012)

* Audio: As part of the content in the Digital Library, the user can find mp3 files according to the units. Audio is a crucial aid when teaching a foreign language, its use systematizes students’ listening skills and ability to summarize the main ideas

or identify specific words and phrases. It constitutes the foundations for future subjects such as interpreting. Each textbook is accompanied with the collection of tracks for the listening exercises.

3.2 Assessment of the DLELII by specialists' criteria

After designing the DL, the proposal was presented to a group of specialists to be assessed. It was decided to assess it from the point of view of scientific and technological product and from the EAP content. Therefore, the assessment was carried out by specialists in the area of digital libraries and specialists in the area of Academic English language teaching.

They all were selected using the following criteria:

1. Experience in the field of scientific and technological information, specifically in the area of digital libraries.
2. Experience in the teaching of English Language II.
3. Scientific and academic degree.

The specialists of scientific and technological information were given a survey (Appendix 11) and the specialists in the area of EAP were given another one (Appendix 12). Both surveys contained several descriptors to be assessed for different purposes. In the case of specialists in digital libraries the focus was on the criteria: Structure, Completeness, Originality, Pertinence, Accessibility, Navigation and Reliability taken from the article *"What is a good digital library?" – A quality model for digital libraries* by Goncalves, Moreira, Fox, & Watson (2007). On the other hand, specialists in the teaching of English Language II were supposed to assess the DLELII using the following criteria: Validity, Content, Applicability, Completeness, Organization, Consistency, Accessibility and Reliability.

In both surveys, they had to select in a scale from 1 to 5, taking into consideration that 1 was the lowest category and 5 was the highest. In addition, the researcher asked for suggestions in case the assessment was lower than 5.

3.2.1 Results

Survey to Specialists in the area of digital libraries:

100% of the specialists in this field positively assessed the DLELII with the scale rate of 5 in all the descriptors. They highlighted that the DLELII provides a wide variety of materials such as books, audio and media files for the improvement of the teaching and learning process. According to them, its interactivity and navigation is

feasible for any user and its full-text indexes from the document text with flexible browsing facilities allow a search by author, title, keywords, etc.

Survey to English Language specialists:

- Validity and Accessibility: 80% of the sample marked 5 in these categories while 20% marked 4. The suggestion made by the specialist was the need of automation in the sense of creating a hyperlink between the text and the mp3 files in the case of Listening. Unfortunately, after having discussed the topic with the specialists in the area of digital libraries, they considered that the software GSDL did not support this option since digital libraries are not necessarily supposed to have embedded it. This software, specifically, was selected for the fact of being portable and meeting the main objective of the proposal. This portable feature is only possible in this software, which makes it suitable for this research work.
- Content: It was assessed with 5 by 100% of the specialists.
- Applicability: 100% of the language specialists also marked 5 in this criterion.
- Completeness: It was assessed with 5 by 80% of the specialists while one of them marked 4. In this case it is important to highlight that this specialist considered that there were too many materials in the Digital Library compared to the amount of hours for the subject. However, it is considered that the DLELII was meant to systematize the bibliography and update it mainly for self-study which was the main reason for including a large amount of instructional materials. Paradoxically, completeness was one of the most rated criteria by the specialists in the area of digital library who stated that this is one of the most important features of a Digital Library.
- Organization and Reliability were assessed with 5 showing the quality of the materials included in the Digital Library, which come from updated and reliable sources, as well as the logical and coherent organization of the information in the software.
- Consistency was evaluated with 5 by 80 % of the specialists. The reason for evaluating this criterion with 4 in one case was the fact of the Digital Library providing more than one book for the Writing skill. It can be interpreted that the specialist took into account the different approaches textbooks have towards the writing process that might affect consistency. However, only two books were included for this skill in order to cover different subskills students should master for the C1 level and this was, for instance, the case of formal letter writing which is well approached in the

Complete Certificate in Advance English by Guy Brook-Hart and Simon Haines (2009) suggested by other professors.

As it can be seen from above, 100% of the specialists in both fields agreed that the DLELII meets the students' needs, systematizes and updates the bibliography for English Language II in a comprehensive way. It offers an interactive and feasible interface which allow users to easy access the bibliography of each unit and skills. Furthermore, from the words of one of the specialists, *"it has been a great contribution since it supports the teaching and learning process as a valuable aid which is updated and easy to access."*

3.3 Partial Conclusions

This chapter was devoted to the description of the proposal of the Digital Library for English Language II and the process of building it. Its main principles, features and description were given as well the assessment criteria by specialists in the area of EAP and Scientific and Technological Information. Therefore, it was concluded that the DLELII was suitable for the purpose it was created.



CONCLUSIONS

Conclusions

1. Digital Libraries are focused collections which facilitate the access and systematization of materials. They have been used in higher education as an ICTs tool to optimize the teaching and learning process when some difficulties are evidenced in the bibliography of the academic courses. EAP courses are designed according to the learners' needs for succeeding in academic environments, so the language skills should be consolidated using authentic language multimedia and multimodal materials.
2. From the needs analysis concerning the bibliography of the subject English Language II, the results showed that there are some shortages regarding the quality, availability and organization of the existing materials in the Local Network. Students and professors agreed that the collection should be enlarged and complemented with more tasks for developing the language skills. EAP was proved to be essential from an interdisciplinary approach.
3. The DLELII was designed using the Greenstone Digital Library Software and contains a collection of a wide variety of bibliography from reliable sources logically and coherently organized according to the units and skills of the Syllabus and consistent with the C1 level.
4. The proposal was positively assessed by the specialists in general, who considered the DLELII as a valid contribution for the improvement of the teaching and learning process of the subject.



RECOMENDATIONS

Recommendations

This diploma paper was intended to solve a problem related with the bibliography in the subject English Language II, so it will be advisable:

- to apply the proposal to the teaching and learning process of the subject English Language II of the course English language with a second foreign language: French at the Universidad Central «Marta Abreu» de Las Villas.
- to validate the effectiveness of the DLELII after one academic year benchmarking.
- to publish the DLELII in the Moodle platform.
- to generalize the results in other subjects for the systematization of bibliography in the teaching and learning process.



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APPENDIXES

Appendixes:

Appendix 1

Observation Guide:

Aim: to gain a closer insight into students' practices in respect to information management in the subject English Language II.

A scale of Good (G), Average (A) and Bad (B) was used. In order to assess quantitatively the observation this scale was represented in points from 1-100, where:

G \geq 90

A \geq 75 \leq 89

B \leq 74

Categories	Scale		
	G	A	B
Access to the bibliography of the subject English Language II.		80	
Characteristics of the computer lab.		85	
Conditions of the bibliography.			70
Students' skill in the search of information	95		

Appendix 2

Objective: To diagnose the students' needs of bibliography in the subject English Language II.

Dear student, this questionnaire is designed in order to diagnose the elements regarding the bibliography that is used the teaching and learning process of the subject English Language II. It is anonymous and we ask you to answer as close to the reality as possible. Thank you very much.

1. The subject English Language II has:

☐ Basic Bibliography (the textbook)

☐ Complementary bibliography (texts of exercises, videos, listening, etc)

☐ None of the previous ones

2. From your point of view, how do you characterize the bibliography of the subject?

☐ Sufficient (when it satisfies all the needs of the subject)

☐ Insufficient (when it does not satisfy the basic needs)

3. Do you access to the bibliography in the folder of the subject English Language II provided by the virtual platform?

☐ Yes ☐ No

4. Does this virtual platform satisfy the bibliography needs in the teaching and learning process of the subject English Language II?

☐ Yes ☐ No

a). If not, why? Choose any of the following limitations:

☐ The bibliography is not enough for the teaching and learning process in the subject English Language II.

☐ There is only one textbook for the subject.

☐ The access to the original sources of information is limited.

☐ The bibliography is not properly organized.

☐ There are no complementary activities for the language skills development and the use of English.

If there is any other limitation in respect to the bibliography, mention it:

5. Do you consider that these limitations may affect students' motivation towards the subject English Language II?

☐ Yes ☐ No

6. What could be the best solution to these limitations? Choose any of the following solutions:

____ arrange existent bibliography according to the contents studied in each of the language skills (listening, writing, speaking, reading).

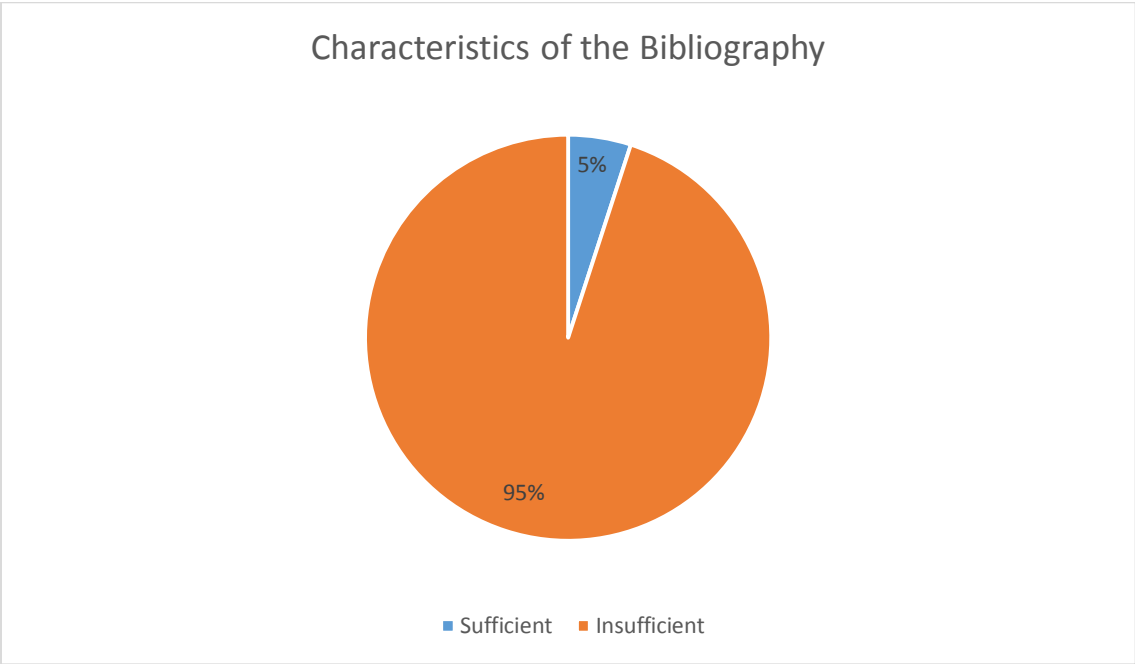
____ Incorporate more instructional materials (from different sources) for each of the language skills (listening, writing, speaking, reading).

____ Incorporate more activities for autonomous learning and self-assessment (from different sources) for each of the language skills (listening, writing, speaking, reading).

If there is any other solution, mention it:

Appendix 3

Graph 1. Characteristics of the English Language II bibliography.



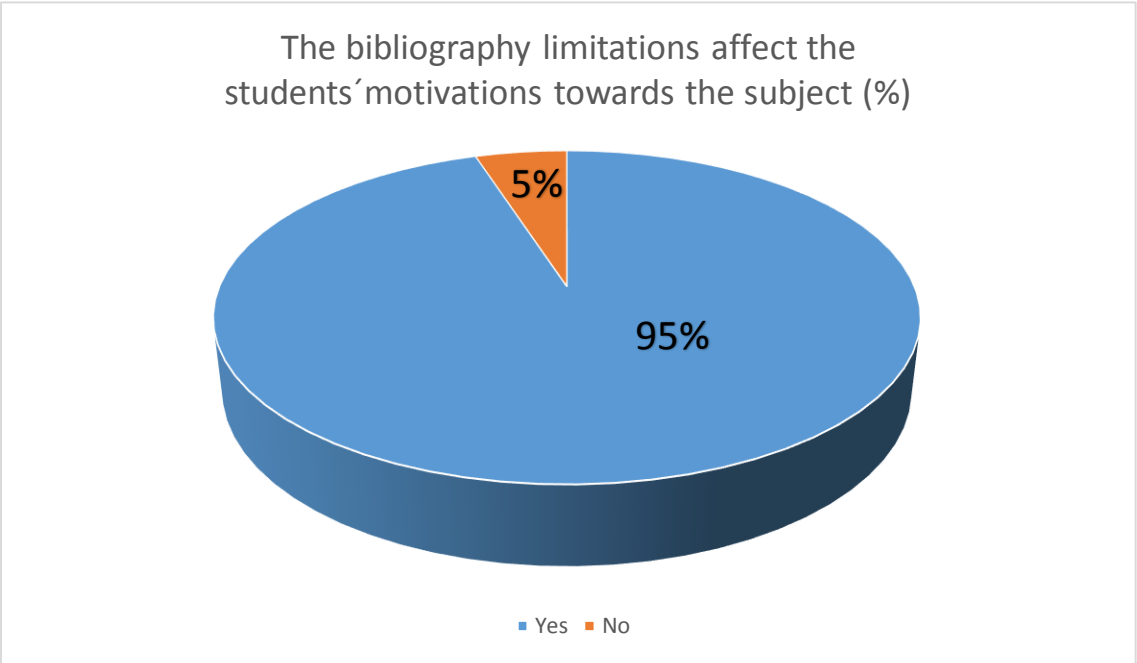
Appendix 4

Table 3. Virtual Platform and satisfaction concerning its bibliography.

Virtual Platform (VP)	Number of students			
	Yes	%	No	%
Students' access to the folder	19	90	2	10
Satisfaction concerning the bibliography of the subject located in the VP	1	5	20	95

Appendix 5

Graph 3. Students' motivation towards English Language II.



Appendix 6

In-depth interview to the main professor of the subject English Language II, the professors of the faculty and the department authorities.

Aim: to determine the professors' opinions towards the importance of EAP and English Language II as an interdisciplinary subject and suggestions concerning the bibliography

Object: The subject English Language II.

Interview guide:

1. "A good knowledge of English for Academic Purposes offers valuable tools to succeed in an academic context" Do you agree or disagree with this statement?
2. From your point of view, what is the importance of EAP as a foundation for Interpreting and Translation?
 - 2.1 How does EAP influence students' learning concerning:
 - Vocabulary
 - Contents
 - Genre
3. Do you know about the current situation regarding the bibliography of the subject English Language II?
4. Do you think this bibliography is sufficient or insufficient?
5. What kind of instructional materials or activities would you include in the subject in order to systematize its bibliography?
6. From your own experience, what would be a good and suitable structure for the bibliography?

Appendix 7

Table 4. Importance of EAP for students' professional growth and as an interdisciplinary subject.

Indicators	Number of Professors	%
Importance of Academic English for the students' professional growth	9	100
Academic English relationship with the rest of the subjects (Interpreting and Translation)	9	100

Appendix 8

Table 5. Impact of EAP on Translation and Interpreting and knowledge about the bibliography of English Language II.

Indicators	Number of Professors	%
The impact of Academic English on the specific skills of Translation and Interpreting - command of specific vocabulary related with different genre and contents.	9	100
Knowledge about the organization of the bibliography in English Language II	9	100

Appendix 9

Table 6. Verbalizations of the professors concerning the interview.

Categories		Verbalizations
1	Importance of Academic English for the students' professional growth.	<i>"An English language professional must have a mastery of the language in academic contexts and this can only be accomplished through EAP."</i>
2	Academic English relationship with the rest of the subjects (Interpreting and Translation)	<i>"If the student has a good knowledge of the Academic English received in second year, it will be easier to cope with Interpreting and Translation"</i> <i>"If there is a lexical and syntactic knowledge which can be acquired through Academic English, it will be easier for students to communicate the meaning and speech in Interpreting"</i>
3	The impact of Academic English on the specific skills of Translation and Interpreting- command of specific vocabulary related to different genre and contents.	<i>"The vocabulary range acquired through Academic English is crucial when dealing with newspapers, military and economic documents in interpreting and translation"</i> <i>"The professor of Interpreting and Translation has to focus only on more specific fields, since Academic English prepare students to deal with these future situations"</i>

4	Knowledge about the organization of the bibliography in English Language II.	<p><i>“IELTS is the textbook of the subject and English Language II is a combination of different international assessment criteria in order to achieve a C1 level”</i></p> <p><i>‘It could be better to use the IELTS and complement it with other books”</i></p>
4.1	Suggestions for improvement.	<p><i>“To incorporate more writing lesson in order to really achieve a C1 level at the end of the year”</i></p> <p><i>“To organize the Digital Library in semesters, theme units and skills”</i></p> <p><i>“To complement the textbook – IELTS- with CAE”</i></p> <p><i>“To incorporate more Grammar and Vocabulary books”</i></p>

Appendix 10

User's Guide for the DLELII

Digital Library for English Language II

USER'S GUIDE

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Universidad Central “Marta Abreu” of Las Villas

About the Software

Digital Library for English Language II is a software designed for second year students of English Language with a second foreign language: French. Users can find updated and systematized bibliography for the subject English Language II as well as self-assessment activities aimed to systematize students' skills. Its purpose is to implement the teaching and learning process in the subject English Language II by systematizing, organizing and updating the bibliography.

This Manual provides a clear description to use the Digital Library for English Language II (DLELII)

Section 1 deals with the start of the DLELII

Section 2 deals with the navigation in the DLELII

Getting Started

1. Open the folder “Digital Library for English Language II”
2. Double click on the file “DLELII” (See Fig. 1)

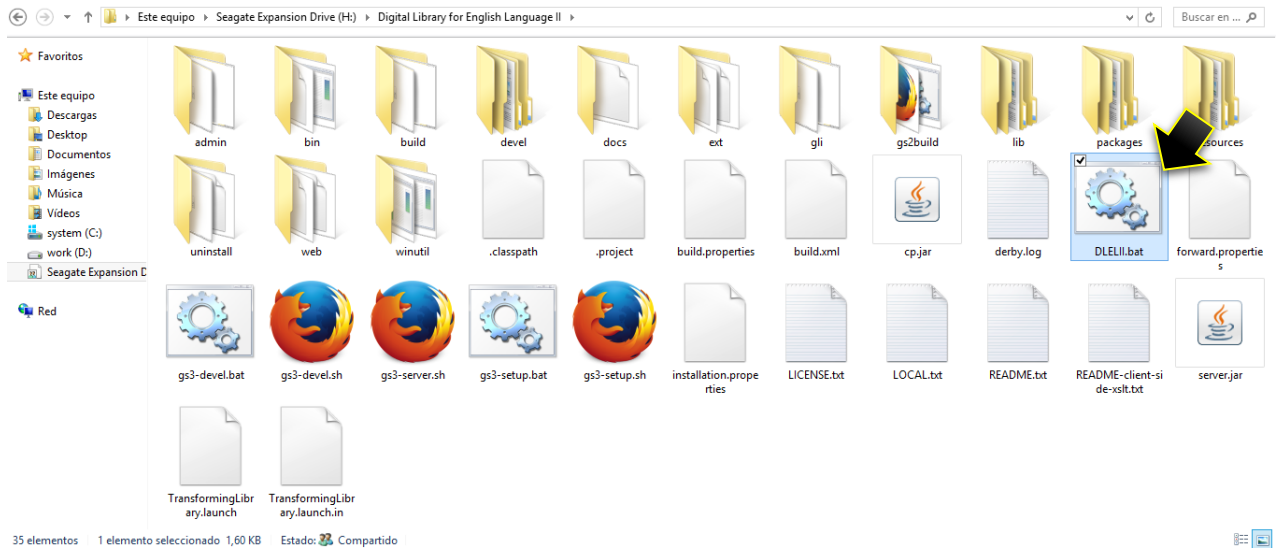


Fig. 1 Digital Library for English Language II folder.

3. This action will open the Greenstone Server. Click on Enter the Library (Fig. 2)

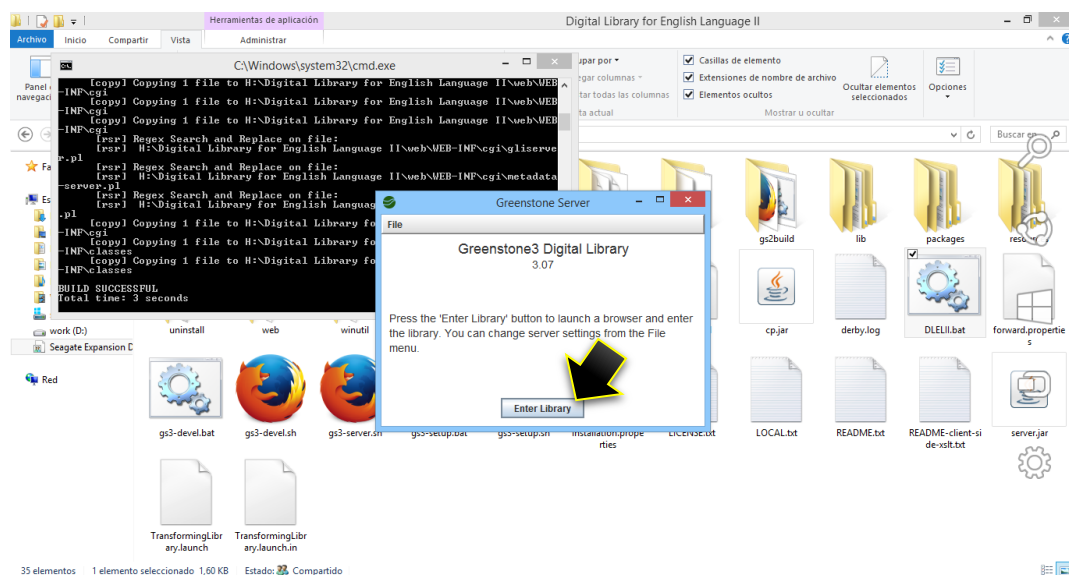


Fig. 2 Greenstone Server

4. Click on the DLELII (See Fig. 3) and enjoy it.

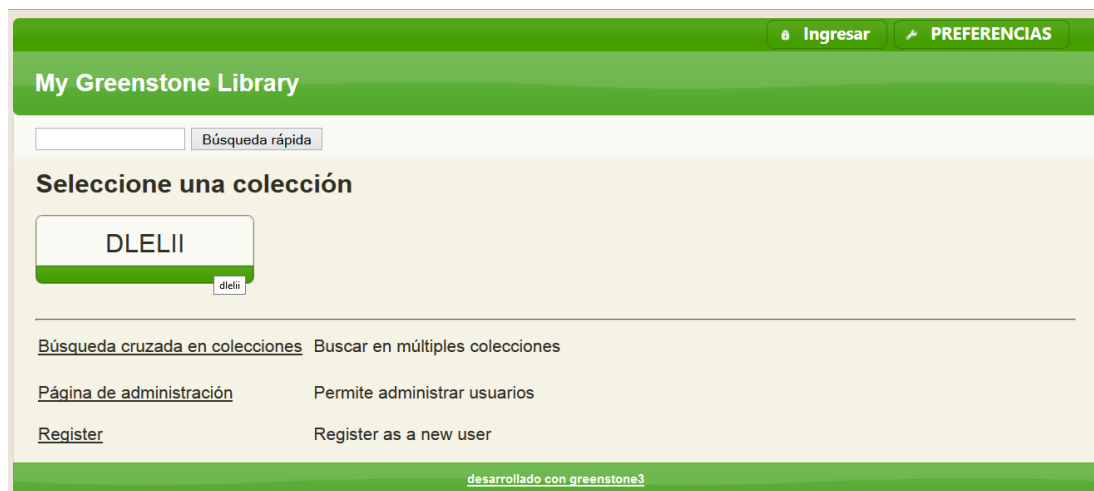


Fig. 3 Starting the DLELII

How to navigate in the DLELII

Each Browser can be used to access the bibliography in the library. (See Fig. 4)

- * Syllabus Browser: contains the Syllabus of the subject. The user may find general information related to the English Language II as well as the units depending on the semester, the number of teaching and practice hours, evaluations and the bibliography. They may find the objectives, topics and main contents of units and skills.

- * Semester 1 Browser: Units from 1 to 9 described in the Syllabus of the subject English Language II.

- * Semester 2 Browser: Units from 10 to 21 of the subject.

- * Skills Browser: the same instructional materials can be found organized in skills for self-study.

There is a Search feature that allows the user to search for information by author, title, keywords, publisher, contributor, date, etc.

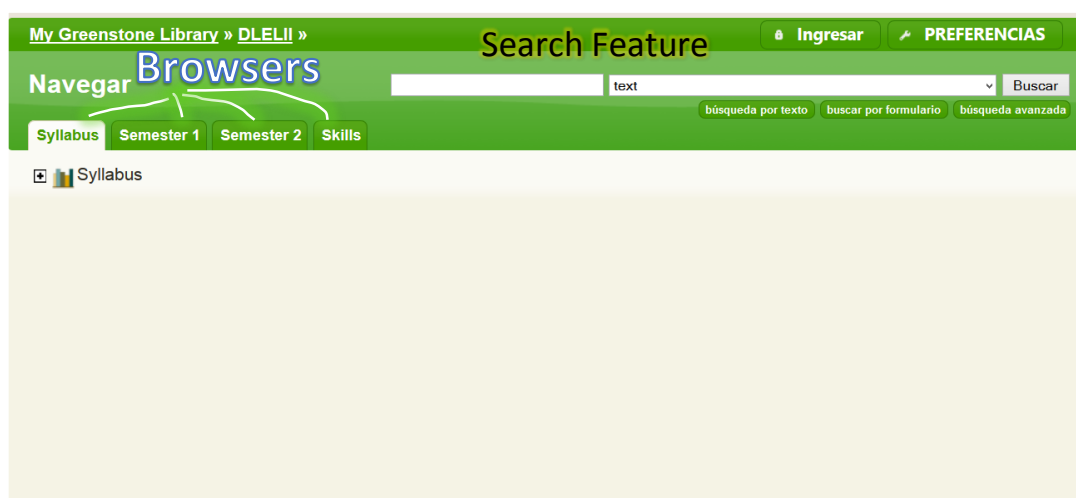


Fig. 4 DLELII

Appendix 11

Survey applied to the specialists in the area of Scientific and Technological Information for the assessment of the DLELII.

Encuesta dirigida a los especialistas del área de Información Científico-Técnica para la evaluación de la biblioteca digital DLELII.

Estimado especialista:

Usted ha sido elegido para participar en esta investigación por su experiencia y conocimiento en el tema. El propósito de la presente encuesta es conocer su evaluación con relación a la biblioteca digital DLELII cuyos usuarios directos serán los estudiantes de 2do año de la carrera de Licenciatura en Lengua Inglesa con Segunda Lengua: francés, de la Universidad Central “Marta Abreu” de Las Villas. El objetivo de esta biblioteca es sistematizar la bibliografía existente respecto al Inglés con fines académicos en la asignatura Lengua Inglesa II.

Agradecemos de antemano su colaboración, su valoración será de gran interés en esta investigación y contribuirá a la calidad de nuestro trabajo.

A continuación, le presentamos una tabla con los indicadores establecidos para evaluar la biblioteca digital, siendo 1 la mínima calificación y 5 la máxima. En caso de que la evaluación sea menor de 5, favor de expresar en las observaciones sus razones y posibles sugerencias para la mejora.

Criterios de evaluación	1	2	3	4	5	Observaciones
Pertinencia (Si responde al objetivo trazado)						
Accesibilidad (si la interface te permite recibir información de los materiales instructivos de manera fácil)						
Confiabilidad (si las fuentes de información son confiables)						
Estructura (si está dividido en unidades lógicas y habilidades de la lengua que permiten una búsqueda eficiente.)						
Navegación (si resulta claro para los usuarios el trabajo con la colección)						
Originalidad (si el diseño de la interface es atractivo y organizado)						
Complejamiento (si la colección comprende un número amplio de materiales instructivos del Inglés Académico)						

Agradecemos que complete la información profesional solicitada.

Nombre completo

Categoría científica

Categoría académica

Ocupación

Años de experiencia

Institución

Appendix 12

Survey applied to the specialists in the area of English for academic purposes for the assessment of the DLELII.

Dear professor,

You have been chosen to participate as a specialist in this research work. Your expertise, technical knowledge and professionalism will be greatly appreciated. Therefore, we kindly request your collaboration, in order to assess the proposal of a Digital Library for the subject English Language II (DLELII). The aim of the DLELII is to systematize the bibliography of the subject aimed at developing language skills in English for Academic Purposes.

It is critical that you offer your constructive input on how the contents of the DLELII were designed, as your opinions are valuable for improving the quality and relevance of the proposal.

If you are willing to participate, assess the DLELII by marking a cross on one of the given assessment criteria. The scale is rated from 1 to 5 (considering 5 as the highest value, 1 the lowest). If your evaluation is less than 4, please express your reasons and suggestions for improvement in the Observations column.

Thank you very much for your attention.

Assessment Criteria	1	2	3	4	5	Observations
Validity (if the digital library meets the objective for which it has been created)						
Content (if they meet students 'needs in respect to EAP)						
Applicability (if the Digital Library can be used to manage the information related to EAP and contribute to develop language skills)						
Completeness (if the number of bibliography is sufficient and varied for the development of the four language skills)						
Organization (if the contents are logically and coherently organized according to the units and skills of the Syllabus)						
Consistency (if the books and the activities are consistent with the contents of the Syllabus)						
Accessibility (if the information management through the library is easy and effective)						
Reliability (if the bibliography is from reliable sources)						

We will really appreciate if you complete your personal data.

Full name

Scientific Degree

Academic Degree

Subjects you have taught in the academic course

Years of experience in the academic course

Appendix 13

Specialists consulted in the area of Scientific and Technological Information and digital libraries.

Full Name	Scientific Degree	Academic Degree	Occupation	Years of Experience	Institution
Amed Abel Leiva Mederos	PhD.	Assistant Professor	Professor	14	DDICDT
Grisly Meneses Placeres	Ph.D.	Full Professor	Principal of the CDICT	14	CDICT

Appendix 14

Specialists consulted in the area of English for Academic Purposes for the assessment of the DLELII.

Full Name	Scientific Degree	Academic Degree	Subjects taught	Years of Experience
Alicia Maria Moya Torres	MSc.	Assistant Professor	Didactics, EFL	27
Humberto Miñoso Machado	MSc.	Assistant Professor	English Language I and II	8
Manuel Llanes Abeijón	MSc.	Assistant Professor	Academic English, Linguistic, Translation	38