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**Designing a Multi-focus Syllabus to teach ESP for
Communication: the Case of Pharmacy Students at
Blida University**

Thesis submitted to the department of English in candidacy for the degree of
Doctorate in English Language and Education

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Declaration

I confirm that this thesis presented for the degree of Doctorate in English language and education has been solely the result of my own work.

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Dedication

*To my beloved mother and father;
my beloved husband
for their love, endless support and sacrifices*

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Abstract

The main concern of the present research revolves around the identification of Pharmacy students' language needs so as to develop the required language skills to reach a communicative outcome. This was carried out by means of a multi-focus syllabus designed to help students achieve this goal. Therefore, the present study comprises two types of research design. Firstly, the case study explored the status of English language teaching within the Department of Pharmacy at Blida University, and subsequently a needs analysis was conducted using the following research tools: questionnaires with first and second year students, postgraduate students, as well as pharmacists working in different sectors; interviews with subject specialists and the English teacher; and, finally, classroom observation conducted amongst first and second year students who have English in their study program. After analysing the gathered data, it was revealed that communication constitutes a major factor in academic and workplace situations. Besides, students particularly need to develop their reading and speaking skills and improve vocabulary comprehension and acquisition. Consequently, a multi-focus syllabus was designed to allow a wide array of functions, skills and topics to be integrated within tasks and activities that are most relevant to students' needs. The second step in this work involved action research to evaluate the impact of the syllabus content and teaching practice in helping students communicate effectively. In this phase, the above-mentioned syllabus was implemented and taught by the researcher using communication tasks, narratives and role plays as teaching techniques. Concerning the action research, the researcher adopted three instruments to gather data: an achievement test, records from the teacher's field notes, and focus group discussion. The results obtained showed the positive impact of the intervention in helping students promote their linguistic skills and knowledge and use them to communicate effectively. It also created an interesting and enjoyable learning atmosphere as it made students actively involved in the learning process. Hence it is recommended that teachers implement the multi-focus syllabus in the Algerian EMP context as a means to develop the students' communicative abilities.

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Key to Abbreviations

CEFR Common European Framework Reference

CNP Communication Needs Processor

DEMS Diplôme d'Etude Médicale Spécialisée

EAP English for Academic Purposes

EFL English as a Foreign Language

ELT English Language Teaching

EMP English for Medical Purposes

EOP English for Occupational Purposes

EPP English for Pharmaceutical Purposes

ESL English as a Second Language

ESP English for Specific Purposes

FDA Food and Drug Administration

GE General English

NIA Needs Identification and Analysis

PPP Presentation Practice Production

P.S.A Present Situation Analysis

GENERAL INTRODUCTION

GENERAL INTRODUCTION

In the last twenty years, English has become the language of globalization. As it is required in all domains, there has been a growing demand for learning the language and developing the skills required for performing well in academic and workplace situations. For instance, understanding the literature of the particular discipline, or communicating with people in the area of expertise, can be the ultimate goal for a group of students or workers belonging to the same area of specialization.

Teaching English at tertiary level is related to the students' area of specialization, which is the concern of ESP - English for Specific Purposes. This field of teaching needs to be student-centred, allowing students to manage their own learning process. The practice of English teaching is governed by a set of approaches, which aim at teaching the language from a variety of perspectives. If we shed light on a communication-oriented language teaching, its major strand centers around the essential belief that if students are involved in communicative tasks and activities, a development of linguistic knowledge and skills to achieve effective communication will take place.

The medical world is continually progressing, and people, in particular those involved in the field, should undoubtedly be aware of these changes. Pharmacy, as a specialty within the medical domain is constantly evolving in terms of industrial, biological and clinical areas. Through the findings of a semi-structured, informal interview conducted with a group of pharmacists working in different domains (medical representatives, industrial pharmacist, pharmacist as microbiologist, teacher pharmacist and a dispensing chemist), it is necessary to shed light on students' English language needs, as well as to draw conclusions about what an effective design for teaching content and pedagogy might look like, in order to meet these needs and respond to the requirements of the target situation.

The Algerian educational context encourages English language teaching (ELT) development at all levels, from secondary to higher education. With regard to the department of Pharmacy at Blida University, English is incorporated within the curriculum, but the implementation of an inclusive pedagogical design has not yet

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taken place. Therefore, the main concern lies in developing an English for Medical Purposes (EMP) course to cope with learners' needs and the requirements of the pharmaceutical domain. Whenever the concerned population reveals the needs, they are providing, "information, which when acted upon, makes courses better adapted to students' needs" (Gardner and Winslow, 1983: 76). It would be of paramount importance, then, to focus on target and learning needs, because many programme designers have been guilty of focusing too much on the desired end-product, without giving enough thought to the process of achieving it (Kennedy and Bolitho, 1984).

Accordingly, the main motives in undertaking the present research work are the following:

- The necessity to meet the learners' needs and target situation requirements alongside consideration of EMP universal conventions.
- The need for communication to cope with the updates in Pharmacy that are provided in English.
- Demand for design of an EMP course that focuses on a variety of skills and language components that Pharmacy students need.
- The lack of communication-based tasks in the English class.

The significance of the present study lies in offering a language syllabus which can be implemented in an EMP classroom to help students foster their linguistic skills and knowledge to build communicative competence.

Therefore, in order to develop a language course that will allow students to practice the necessary language skills and widen their linguistic knowledge, the researcher sought to investigate Pharmacy students' language needs at Saad Dahlab-Blida 1 University, and to design and implement a multi-focus syllabus to meet the language requirements in the global medical world. Accordingly, the following questions are raised:

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- 1- What are the language components and skills that Pharmacy students most need to develop?
- 2- How can we best improve students' language skills and linguistic knowledge to help them reach effective communication?
- 3- To what extent would a multi-focus ESP syllabus respond to the students' needs and the requirements of the pharmaceutical domain?
- 4- Does the multi-focus syllabus have a positive impact on the development of students' communicative skills?

In this regard, the following research hypotheses are provided:

- 1) It is important for Pharmacy students to develop their reading and speaking skills and promote their understanding of pharmaceutical terminology.
- 2) Involving students in communicative tasks would best help them expand their linguistic knowledge and foster their language skills to achieve effective communication.
- 3) Designing a multi-focus syllabus would allow a wide array of instructional content and techniques that make students actively involved in the learning process.
- 4) Implementing a multi-focus syllabus may have a positive impact on Pharmacy students' performance and communication skills.

After defining the questions and hypotheses which will be further discussed in this study, the objectives of the study are as follows:

- 1) Designing an ESP syllabus that meets Pharmacy students' needs and helps them communicate effectively in academic and workplace situations;
- 2) Suggesting and trying out new teaching techniques with medical students, such as, role plays, narratives and communicative tasks to energize the language classroom and boost the learning outcomes.

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3) Improving students' linguistic skills and knowledge through communicative tasks

4) Reinforce students' ability to infer meaning from text and acquire medical terminology.

In order to reach the above mentioned objectives, two research designs are used: case study and action research. The aim behind using mixed-method research is to provide the required data that will address the different parts of the research questions. The informants selected for the case study are first and second year undergraduate and postgraduate Pharmacy students, Pharmacy teachers, the English language teacher and Pharmacists working in different sectors. Students and pharmacists are given questionnaires whereas teachers are invited to participate in a semi-structured interview. These research instruments allow the researcher to identify and analyse the language needs of pharmacy students and the language requirements of the academic and professional contexts so as to design a language syllabus accordingly. The second phase of this research consists of implementing a multi-focus syllabus through action research to gauge its level of effectiveness on students' learning outcomes and communication skills. It is characterized by three research instruments: teacher field' notes, achievement test and focus group discussion, which aim at recording students' behaviour, collecting their scores and views about the intervention. This work also involves the theoretical underpinning studies. It is divided into five chapters.

The work was initiated by providing the theoretical background upon which the researcher builds the present research, delineating the steps to follow to meet the objectives of the study. It is constituted of two parts. The first section explores the world of ESP and related topics, that is, needs analysis process and syllabus design principles. The second provides insights into teaching English for Medical Purposes, shedding light on the main language components that a Medical English syllabus should contain, and incorporating the different teaching techniques and strategies used nowadays in ESP contexts, as can be applied in a Medical English

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teaching environment. It also tackles the multi-focus syllabus and how this can be designed to suit medical or pharmaceutical purposes.

Chapter Two revolves around the description of the actual English teaching situation in the department of Pharmacy and explores the main functions of use of English in workplace situations. It provides an overview of the Pharmacy studies program and highlights the status of English for first and second year students, since most of them participated in this study. In addition, the research design is also described here, including the case study and action research, with further explanation provided on the research instruments and the process of data collection. The objective is to trace the research work path from the description, then carry out an analysis, and, finally, to focus on syllabus development and implementation.

Chapter Three is concerned with the Needs Identification and Analysis process. It proceeds with collection of information about the teaching situation, and the language needs and the role of communication in English from students, academic staff members, as well as pharmacists at work. Subsequently, analysis of the data gathered through questionnaires, interviews and observation is followed by comparison and interpretation of the results.

The fourth chapter is concerned with design of a multi-focus syllabus that responds to the needs of Pharmacy students in academic and professional settings, and which consists of fostering reading and speaking skills, as well as vocabulary acquisition for communicative purposes. The content of the syllabus designed for first year students is described in detail, outlining the different language skills and components included within the instructional units, together with activities and communicative tasks.

Chapter Five follows the programme which implements the multi-focus syllabus, with new teaching techniques. This phase consists of an action research study, undertaken to gauge the effectiveness of the proposed syllabus in helping students improve their reading and speaking skills and facilitate vocabulary comprehension and acquisition towards an effective communication. The

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intervention also targets the quality of the teaching practice by suggesting narratives and communicative tasks to create a positive learning environment. The chapter is concluded by a set of suggestions for further pedagogical implications.

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1.1 Introduction

With a fast-changing world and the new trend of globalization, English has become the main language of education and economic exchange, a fact that results in the necessity to learn the language and improve the communication skills needed to cope with the new challenges such as multilingualism and market exchange.

The following chapter comprises two parts. The first part explores the territory of ESP, dealing with its history and development through time, then sheds light on one of its main concerns, that is, needs analysis and its principles. After this, approaches to course design are provided, including syllabus and materials development.

The second part of the Literature Review chapter is allocated to perceptions of teaching English for Medical Purposes. It focuses mainly on the importance and significance of designing a multi-focus syllabus for Pharmacy students, providing a record of the main elements that should be taken into account.

1.2 ESP: Exploring the Area

The first part of this chapter is devoted to investigating the context of ESP as a branch of ELT, including its definition and development, types and teaching. Then, the scope is narrowed to explore English for Medical Purposes and its teaching practices

1.2. 1 Definition and Development

The term English for Specific Purposes (ESP) first appeared in the 1960s as a result of job-market requirements. Many speakers of English as an additional language working in multinational firms or taking undergraduate and postgraduate programs are driven by the need to develop their level of proficiency (Widodo, 2015). Awareness of English increases the ability to understand disciplinary knowledge, equipping learners/workers with the necessary language skills to encounter academic and professional situations.

ESP is an approach to language teaching that highlights the learner's needs and the relevance of course design to match these needs; the rationale for learning forms the basis of ESP methodologies (Hutchinson and Waters, 1987). Robinson (1991) adds that ESP is “goal-oriented language learning”, indicating that learners learn the language to pursue their academic or professional objectives. Thus, they learn English that corresponds to the discipline they are enrolled in, or to accomplish a task that necessitates use of English language skills. ESP also focuses on, “preparing learners for chosen communicative environments”, as stated by Mohan (1986, in Kareva, 2013: 1479). This idea was later emphasized by Hutchinson and Waters (2002), highlighting that communication and learning are the roots that sustain ESP.

In fact, the focus of ESP should not only be investigation of the learners' needs to help them achieve competence in a specific domain, but also to facilitate the ability to, “communicate and generally perform well in their major field of studies [...] find it easy for them to settle in to their work conditions where most of the technology trends are directly related to English language capability and [...] be easily employed in their profession” (Saliu and Hajrullai, 2016:746). It should be noted that the factors influencing the development of ESP reveal salient features which are fundamental for those conducting research in this area.

1.2.2 A Brief History of ESP Emergence and Evolution

ESP grew from a number of converging factors. The major interest in ESP sprang from post-World War 2 where the new economy-driven world was born. This era witnessed an expansion in scientific fields, including technology, and commerce. The development of technology and international trade was closely linked to the dominance of the western world, as Hutchinson and Waters (1987:6) have observed, “The effect was to create a whole new mass of people wanting to learn English, not for the pleasure or prestige of knowing the language, but because English was the key to the international currencies of technology and commerce.”

The second factor to be considered is the revolutionary shift in linguistics. Williams (2014:2) reports that the late 1960s and early 1970s witnessed a move from theoretical linguistics which focuses on grammar towards “a growing interest in communication in real situations”. In this phase more attention was addressed to learners’ language needs and to the linguistic features of the different areas of specialization. ESP research works (like Ewer and Latorre’s, 1969) emphasize on the analysis of the lexical features of the register of each specialty to develop courses accordingly.

What also marked the development of ESP is the skills-based approach that came out as a response to students’ needs in different fields. It appeared that discourse analysis could form the basis of ESP in helping the learners reach their goal in the target situation, since its purpose, primarily, revolved around examination of the language features related to a specific field. Therefore, comprehension and production of discourse necessitated certain skills and strategies that would allow learners to function adequately in the target situation. The question that was raised, then, is which skills the learners need in these situations. This enquiry paved the way for the development of needs analysis which investigates the learners’ purpose for learning the language.

In the 1970s and 1980s a new trend of ESP work and research emerged. The concept of needs analysis was a spur to put more emphasis on the learner rather than solely on language use. In other words, this evolution involved taking into account that, “the learners already possessed skills and different learning styles” (Dudley-Evans & St. John, 1998: 25-26), in order to enable the successful learning. In addition to the notion of focusing on the learner, this period was also witness to the teaching of materials development related to content areas (Johns and Dudley-Evans, 1991).

The last phase of ESP history; namely, from the 1990s onwards, led a growing interest in developing the field and catering for the needs of EFL/ESL learners. First, the acceptance of ESP as an academic discipline is highly indicative of this period.

The expansion of English for Academic purposes was due to the revolutionary works of scholars, such as John Swales (e.g., 1990, 2004) and Ann Johns (e.g., 2013), and the interest of many universities in the United Kingdom (as cited in Williams 2014) in offering English courses for non-native speakers related to their area of specialty. As Hewings and Hewings (2002) note, there was also a tendency towards EOP (English for Occupational Purposes), observing that advancement of knowledge about the target situation, including texts and context, may contribute towards development of effective ESP teaching.

The profile of ESP has changed over time, but the road seems to have been fruitful. In the last twenty years the learner-centred approach has gained in importance, and responding to students' needs in the target situation has been the focal part in ESP teaching. Moreover, considering the utilitarian purpose of ESP (Mackay and Mountford, 1978), it is a means to an end; namely, teaching to students who consider English as a tool to meet the requirements of their vocation or job. After defining and reporting the development of ESP as a branch of ELT (Javid, 2013), it will be pertinent, then, to shed light on the main features that characterize this field.

1.2.3 Characteristics of ESP

The main features of ESP are organised into two spheres: the Learners' needs, and the range of discourses used in real-life contexts. First, as Hardings (2007:6) reports, ESP is "related directly to what the learner needs to do in their vocation or job". In the same vein, Strevens (1988), when he portrays ESP in terms of absolute and variable aspects, clarifies that it is intended to meet the learners' specific needs. Also, the author pointed to the specificity of the field in contrast to General English, in terms of using specific terminology; in other words, ESP requires a specific teaching methodology, appropriate to teaching for specific situations (Dudley-Evans and St John, 1998). Second, ESP is more tailored to a specific genre, or language in context, than for teaching grammar or language structures (Popescu, 2012). Moreover, ESP

uses specific topics and activities of the discipline or profession it serves, selecting the language skills and discourse accordingly.

1.2.4 Types of ESP

ESP is meant to satisfy the learners' vocational, professional or academic demands. Many researchers have undertaken investigations into the types of ESP. Most of them, such as Hutchinson and Waters (1987) and Robinson (1991) classify ESP into two main categories: English for Occupational Purposes (EOP) and English for Academic Purposes (EAP). According to Robinson, EOP comprises work-related needs and training whereas EAP includes academic study needs. Hutchinson and Waters illustrate the classification of ESP in more detail in the following diagram:

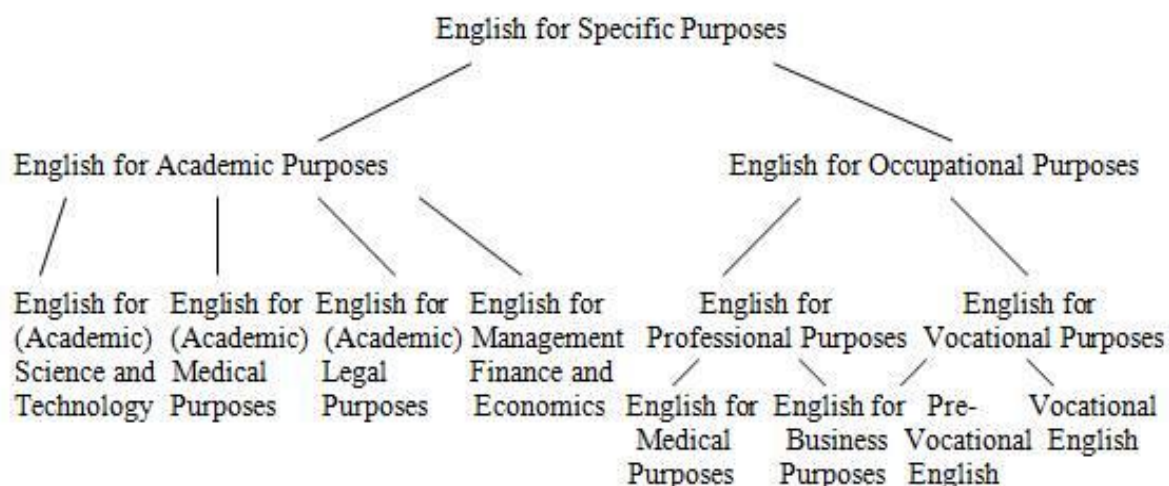


Figure 1.1 Tree diagram for ESP classification (Hutchinson and Waters, 1987: 6)

On the other hand, Williams (2014: 2-3) reports that the ESP tree has been ramifying and the recent classification includes the following subfields:

English for Science and Technology (EST)

- Vocational English as a Second Language (VESL)
- English for Vocational Purposes (EVP)
- English for Specific and Academic Purposes (ESAP)
- English for Professional and Academic Purposes (EPAP)

- English as a Lingua Franca in Academic Settings (ELFA)
- English for Occupational Purposes (EOP)
- English for Business Communication (EBC)
- English for Sociocultural Purposes (ESCP)
- English for General Business Purposes (EGBP)
- English for Medical Purposes (EMP)
- English for Legal Purposes (ELP)
- English for Academic Legal Purposes (EALP)
- English for Research Publication Purposes (ERPP).

And in this digital era, recent additions have included:

- Electronic Business English (e-BE)
- Electronic Medical English (e-ME).

The significance of the classification lies in the design of appropriate courses that will help learners achieve their academic and occupational goals. Teaching English for Specific Purposes should be thoroughly implemented. It starts with the needs analysis among the target population, and then deals with the course design, including selection of discourse and activities appropriate to the language of the context.

1.2.5 Teaching ESP

ESP instruction has become increasingly important since the 1990s. It has been distinguished by its learner-centeredness (Hutchinson and Waters, 1992) contrary to a one-size-fits-all approach. The authors argue that, “all decisions as to content and method are based on the learner’s reason for learning” (p.19). It is also considered as an approach to language teaching due to the fact that it pursues the goal of satisfying specific needs (Barrantes, 2009). With regard to its major elements, ESP instruction deals with three fields of knowledge: language, pedagogy and the student’s discipline (Robinson 1991, in Al Aghbari, 2016). In the same vein, Górska-Poręcka (2013, quoted in De Jong & Perdomo, 2016: 353), highlights the basic requirements of ESP teaching as follows:

- Language knowledge base:
 - Knowledge of the target language (TL) and the targeted specialist discourse.
 - Linguistic research and language analysis expertise, including the procedural knowledge of linguistic, discourse, and genre analysis.
- The subject content knowledge base:
 - Knowledge of the basic concepts and tenets of the discipline to which ESP is related.
 - Familiarity with the discipline- or profession-specific discourse practices (typical speech acts and genres).
- Knowledge of pedagogy.
 - Knowledge of educational skills and teaching techniques in order to improve learning.
 - The understanding of education as a human activity and as a social phenomenon.

In order to decide on the appropriateness of the content of each field, ESP teachers make great efforts in designing a course adequate to the needs of a special group of learners (Li & Huo, 2014). The authors clarify that the process of designing course content involves syllabus design, material design, classroom teaching and evaluation, for general or specific purposes. The following are the key stages of course design:

- Needs analysis
- Design: setting the course content and methodology, including syllabus design and ESP materials
- Teaching and learning
- Assessment
- Evaluation

(adapted from Dudley-Evans & St John, 1998).

1.2.5.1 Needs Analysis

Any course should be based on the analysis of learners' needs (Hutchinson & Waters, 1987). Needs analysis is an indispensable stage in designing ESP materials (Belcher, 2006) and selecting the appropriate content for a specific group of learners. De Jong and Perdomo (2016) convey that needs analysis is an ongoing process whereby the needs are not solely detected during this process, rather, the ESP teacher can continue to identify them during the course and adapt it accordingly. Due to this fact, different approaches to needs analysis were created to meet the students' needs during their learning (Songhori, 2008).

ESP research, as relates to approaches to needs' analysis, has witnessed many changes. Firstly, in 1978 Munby introduced the basis of his approach to needs analysis, "communication needs processor" (CNP), giving priority to learners' requirements in order to function in the designated context. Chambers (1980) used the term "Target Situation Analysis" to refer to Munby's work, which gives paramount importance to function and situation, and which was the fundamental starting point (West, 1994) and an important tool for course designers (Hutchinson and Waters, 1987:54): "With the development of the CNP it seemed as if ESP had come of age. The machinery for identifying the needs of any group of learners had been provided: all the course designers had to do was to operate it".

The predominant element in Munby's model is the CNP which constitutes the basis of his approach to needs analysis. The aim of Munby's CNP is, as Hutchinson and Waters (1987) report, what the learner needs to know in order to function effectively in the target situation. The authors use the CNP to establish a target situation analysis framework. However, contrary to the CNP, they accentuate the role of the learners by investigating their attitudes towards the target situation in the learning process (1987: 59). In fact, to a certain extent, this model neglected the affective factors which Dudley-Evans and St. John (1998) recognize as important. West (1994: 9) reveals the shortcomings of this model as he mentions that it is time-consuming and tends to collect data "about the learner rather than from the learner".

Likewise, Hutchinson and Waters point to the lack of learner-centeredness and attention to learning needs, in addition to the absence of the distinction between necessities, lacks and wants.

Unlike TSA (Target Situation Analysis), PSA (Present Situation Analysis) appeared for the first time in 1980 when Richterich and Chancerel emphasize that the current situation of the learners should serve as the starting point for needs analysis. They reported that, in order to undertake such type of analysis, the ESP practitioner should collect information not only from the learner, but also from the academic institution and work place. Dudley Evans and St. John (1998: 125) state that, “a PSA estimates strengths and weaknesses in language, skills, learning experiences”; in other words, PSA diagnoses first the actual learning abilities and situation of the learners, unlike the TSA, which seeks to identify the learning needs of the learners in the target situation. To illustrate, PSA finds out about the learner’s background knowledge, experience of English learning and level of education, and, “refers to task and activities learners are or will be using English for target situation” (Rahman 2015: 26).

Needs analysis may benefit from a combination of present situation analysis and target situation analysis. With reference to the disparity between PS and TS, Hutchinson and Waters pointed to the scope that appraisal of learners’ lacks or deficiencies might offer (Allwright, 1982) to determine how the gap between present performance and target proficiency might be bridged (Barrantes, 2009).

Referring to Hutchinson and Waters’ needs analysis model (1987: 55), students’ needs in the target situation are classified into: *necessities*, *lacks* and *wants*. The first term refers to “what the learner has to know in order to function effectively in the target situation”. Second, the ‘lacks’ were defined as the existing level of proficiency of the learner, i.e., what the learners already know, so that the course designers can delineate the necessary linguistic features that need to be developed. Considering learner involvement, and for the purpose of measuring students’ awareness of their needs, the researchers formulated the ‘wants’, for investigation of the learners’

subjective needs. They also highlight the notion of ‘learning needs’ that hinges on "what the learner needs to do in order to learn" (ibid: 54).

This model does not only cater for the linguistic features and skills which learners need to acquire, but it also investigates the methods and techniques necessary to achieve the learning objectives (Brahimi and Benyelles, 2017). The authors value the role of educational institutions and staff in providing data about the target situation and learning needs because, as reported by Sysoyev (2000), use of students’ data alone is not a solid basis upon which a course can be developed. Teachers should take into account, “certain things, such as curriculum, institutional guidelines, and standardization that cannot and may not be ignored”, (ibid, quoted in De Jong and Perdomo, 2016).

An important aspect for needs analysis to take into account is analysis of the learners’ communicative needs, in order to ensure successful learning (Basturkmen, 2006, 2010). Gatehouse (2001) asserts the pivotal role of identifying the learners’ communicative needs for the design of communicative tasks that will help the learners handle different roles in the target situation.

1.2.5.2 Course Design

In order to tailor a language course effectively, it is imperative, first, to formulate the goals and objectives which allow a clear picture of the course to be envisaged. Graves (1996: 17) explains, “Goals are general statements of the overall, long-term purposes of the course. Objectives express the specific ways in which the goals will be achieved”; in other words, goals symbolize the destination, and objectives are the guidelines that determine how the final product might be realised. As far as the ESP course content is concerned, Robinson (1991) and Hadley (2006) state that this should be goal-oriented and centred on the language, skills, discourse and genres appropriate to the activities of the discipline it serves.

When establishing the framework of a course, it is important to focus on the learning outcomes. This key element indicates, “the learning that students will be expected to attain at the end of the course” (Spiller, 2015: 2), and provides the appropriate teaching and learning approach. When the designer sets the required level of learning during the given instruction period, they can select teaching materials and content, and develop assessment tasks accordingly. Moon (2002) suggests the formulation of learning outcomes by using the following phrase: “students will be expected to be able to.....”, since the results are not guaranteed.

1.2.5.3 Approaches to Course Design

Conceptualization of course content should be guided by certain principles that stipulate that the procedure should lead towards specified goals. In fact, this entails the use of an approach that dictates the way a syllabus, materials and teaching methodology is to be developed. Hutchinson and Waters (1987) identify three approaches to course design.

1.2.5.3.1 Language-centred Course Design

Language-centred course design aims at drawing a link between the analysis of the target situation and the content of the ESP course. As it is described by Hutchinson and Waters (1987:67), this approach starts with the identification of the target situation of the learners in conjunction with selection of appropriate theoretical views of the language. The target situation will be further analyzed via investigation of its linguistic features. Afterwards, the syllabus will be designed with its components and teaching materials to establish a final evaluation of the proposed process and scheme of work for the syllabus items.

Nevertheless, this approach is criticized for assuming that learning takes place in a systematic and straightforward manner (Basturkmen, 2010), which does not allow for different learning preferences. Three major weaknesses were pointed out by Hutchinson and Waters (1987) as follows:

- The process does not take into account the learning needs
- This approach is considered as inflexible and contrary to the needs analysis, which is characterized as an on-going process.
- ESP teaching elements, such as the type of discourse and activities, are not recognized under the language-centred model.

1.2.5.3.2 Skills-centred Course Design

As opposed to the previous model where the learner's competence is disregarded, "the skills centred course [...] will present its learning objectives (though probably not explicitly) in terms of both performance and competence" (Hutchinson and Waters, 1987: 69); in other words, this model emphasizes the skills and strategies (competence) that learners need to use in order to understand or produce discourse (performance) in the target situation (ibid). Another dimension of this model is that the emphasis in the ESP course is not focused on achievement of a particular set of goals, but on enabling the learner to achieve what they can within the given constraints — according to the time available and the level of student experience (Holmes, 1982).

Although the skills-centred approach applies significant consideration to the student in terms of how s/he processes language, this model considers the learner, "as a user of language rather than as a learner of language" (Hutchinson and Waters, 1987: 70). Therefore, this process is concerned with language use rather than language learning (Guerid and Mami, 2016).

1.2.5.3.3 Learning Centred Approach

Also called a 'learner-centred approach', Hutchinson and Waters (1987:72) explain that the learning-centred approach caters for the way the learner processes information, stating that, "learning is seen as a process in which the learners use what knowledge or skills they have in order to make sense of the flow of new information. Learning, therefore, is an internal process which is crucially dependent upon the knowledge that learners already have and their ability and motivation to use it".

Learner competence, motivation and performance are the essence of the learning-centred approach. As opposed to language-centred and skills-centred approaches to teaching ESP, the learning-centred approach' proceeds by considering first the learner's prior knowledge and how new information can be built upon it. Thus competence can be discovered and developed gradually to reach effective performance outcomes. Motivation, on the other hand, represents an important factor that helps to sustain the learning process.

The authors depicted the learning-centred approach that they adapted as illustrated in the figure below. It starts with identification of learners to be enrolled on the course, followed by the analysis of the learning situation alongside the target situation, and relying on theoretical perspectives of language learning. Students' target and learning needs are subsequently identified and analysed, without neglecting consideration of the constraints of the teaching and learning situation. Syllabus development is the next step, including selection of teaching materials, discourse, and skills required by the target situation. Afterwards, Evaluation is considered as an ongoing process that measures the learners' achievements and gauges the effectiveness of the course.

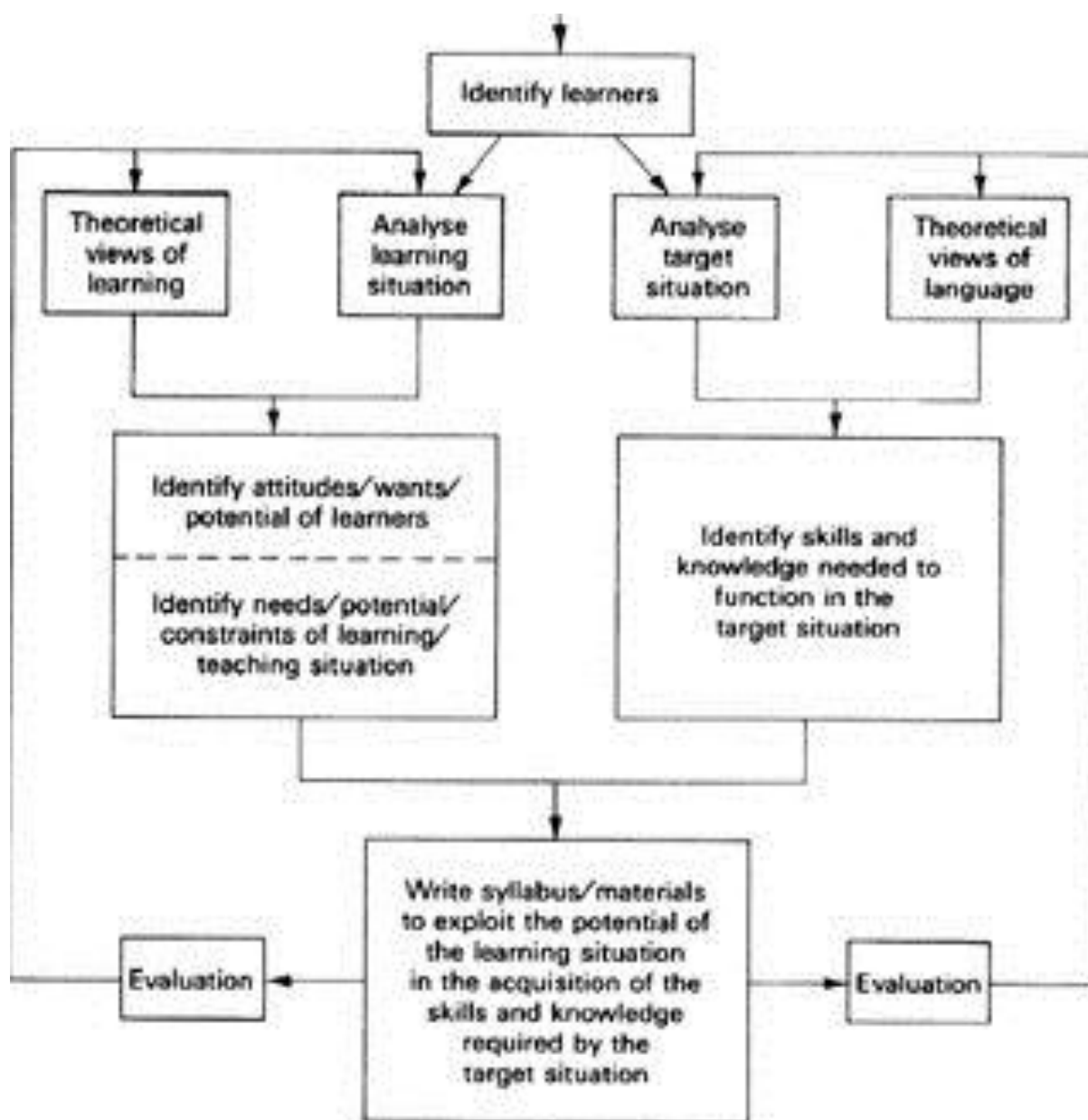


Figure 1.2 Learning-centred approach (Hutchinson and Waters, 1987: 74)

To conclude the comparison of these three course design approaches for ESP teaching, it is noted that they can be viewed as complementary. While the language-centred approach pays less attention to students' needs and learning constraints, the skills-centred approach emphasizes students' learning needs and helps them achieve the stated objectives within the given constraints. The learning centred approach considers, from the beginning, theoretical views of language and learning for syllabus

and materials design. Therefore, depending on the nature of the course and the learner, the designer is able to select the appropriate approach for teaching ESP.

Before conceptualizing the content, the course designer should consider different parameters. After conducting needs analysis and choosing the appropriate approach for the ESP learners, the language teacher will produce, “an integrated series of learning experiences to lead learners to a particular state of knowledge” (Hutchinson and Waters, 1987, 65). Taking the students from their current to their desired state of performance (Barrantes, 2009) requires syllabus planning and preparation of materials, as well as consideration for teaching methodologies to be applied.

1.2.6 ESP Course Design Elements

Over the years of ESP development, researchers (Carter, 1983 and Gatehouse, 2001) have identified the main course design characteristics as follows: a) authentic material, b) purpose-related orientation, which means using tasks to prepare the learners to act effectively in the target situation, and c) self-direction, which points to the fact that students should “have a certain degree of freedom to decide when, what and how they will study” (Gatehouse, 2001: 5). Widodo (2016) states seven key elements of ESP materials that have been adapted for the current study, as presented in the following table:

	ESP elements
Authenticity	Concerned with texts, materials and interactions that are related to students' discipline, social practices and discourse. It fosters learner's autonomy and the notion of communicativeness. Authentic content materials produce better results when given to the students in their chosen area of interest (Gatehouse, 2001; Hutchinson and Waters, 1987)
Topics/themes	Regarded as the starting point for learning. Topic/theme selection aims at designating materials content relevant to students' interest and disciplinary knowledge. This element promotes content-focused and language focused learning.
Texts and contexts	It relies on the systematic relationship between context and text, and the role of contextual factors (social, cultural) in interpreting the language. Selecting authentic texts related to the students discipline will help them understand and produce similar texts.
Knowledge and language	They are portrayed as a content and linguistic system interrelated in discourse. A discipline-related language helps learners understand the content of specialized knowledge and mediates the understanding of disciplinary knowledge.
Tasks or activities	This element determines to what extent students will be engaged with texts and activities. Motivating activities offer students opportunities in using language in their discipline-specific practices. Type of tasks can be interactional or transactional. Tasks should help students to make use of language to perform activities that reflect their disciplinary knowledge, awareness and capability of language use.
Representations of participants and social practices	Participants and social practices (human interaction) are shaped by contexts of situation and culture. Students should be aware of these key components in a communicative setting. The nature of the situation may be interactional and/or transactional.
Pedagogical prompts	Instructive information that guides or enables students to perform learning tasks. Strategies that induce self-regulated and meaningful learning. Tasks that involve language use and encourage learners to work collaboratively.

Table 1.1 key elements in ESP teaching (adapted from Widodo, 2016: 280-283)

Before tracing the route of ESP teaching, it is worth noting that any ESP course should be guided by specific elements, as mentioned above, so as to create a good teaching environment and to ensure positive learning outcomes.

1.2.7 Syllabus Development

A syllabus, as defined by Nunan, (1993: 3), is a “series of accounts and records of what actually happens at the classroom level as teachers and students apply a curriculum to their situation”. To start with, the distinction between ‘curriculum’ and ‘syllabus’ should be made clear. While the former indicates the general statements about the content and purpose of learning (ibid) of a program of studies for a particular subject within an educational institution or system (Stern, 1983), the latter is a “document which says what will be learnt” (Hutchinson and Waters, 1987:80) - a list of content for a course during the given instructional process. The authors consider syllabus design as a second step after formulation of the course objectives and goals, as well as the selection of the approaches to be adopted. The syllabus contains the contents and materials that should be used in a language program.

Different views on syllabus construction have been provided in ESP research. It is believed that any syllabus is built principally on students’ needs in the target situation. Yalden (1987:86) states that, “a syllabus is an instrument to link learners’ needs and aims to activities that take place in the classroom”. According to Brown (1995), there are seven types of syllabi or seven ways in which the teacher can organize the course: Structural, Situational, Topical, Functional, Notional, Skills, and Task or Activity-based. The current trends in syllabus design, following Harmer (2001), came to identify seven distinct approaches to organization of course content:

- A. *The Grammar (or Structural) Syllabus;*
- B. *The Lexical Syllabus;*
- C. *The Notional/Functional Syllabus;*
- D. *The Situational Syllabus;*
- E. *The topic-based Syllabus;*
- F. *The Task-based Syllabus;*
- G. *The Multi-Syllabus Syllabus (multi-focus syllabus).*

1.2.7.1 The Multi-focus Syllabus

Most ESP courses are based on a combination of models. The above mentioned syllabi are the most influential in the fields of ELT and ESP. According to the students' needs and expectations, the teacher develops a syllabus which may be a combination of different approaches, sometimes with one more dominant than the others. Also, it is important to take into account students' reasons for learning, their interest in the course content and the type of activities included; therefore, "it is wise to take an eclectic approach, taking what is useful from each theory and trusting also in the evidence of your own experience as a teacher" (Hutchinson and waters, 1987:51). Larsen-Freeman (2000) points out the usefulness of eclecticism, or the pluralistic approach, to language teaching, in the sense that using a number of syllabi entails application of different materials and activities, as well as teaching techniques, that will serve a given learning situation.

The multi-syllabus syllabus or multi-focus syllabus (Orwig, 1999) is emerging in the educational ESP environment. It gathers and focuses on multiple aspects such as functions, grammatical items, lexis, phonology, topics and skills. However, the combination of elements is based upon a priority of choice (Danni, 2013), and, in an ESP context, the syllabus is designed according to the students' learning and target needs. This approach responds to different learning preferences and teaching situations and supports the use of authentic materials.

1.2.8 Evaluation

The last element to be considered in course design is the learners' performance evaluation or assessment. Measurement of the students' progress and achievement can serve as an aid for learning. It provides feedback from the teaching practice and evaluation of the acquired skills and language. Assessment of learners' language knowledge takes place during the course and when it is finished; so both formative and summative assessment are embedded in the programme. The students' assessment should take place in a suitable environment, and the grade should not be considered to

be a decisive factor for measurement of the learners' levels of language knowledge. Fundamentally, regarding assessment, " its real meaning lies in understanding the reasons why it was given and what it tells the students about how they might improve their future work", (Hutchinson and Waters, 1987: 151).

In the ESP course, the ESP teacher not only needs to evaluate the students, but also the course itself. The second type of evaluation was proposed by Lesiak-Bielawska (2014) for the purpose of assessing the long-term impact of the course and also to evaluate its usefulness in relation to the objectives students are expected to meet.

1.3 English for Medical Purposes: the Multi-focus syllabus for Pharmacy English Course

In this section, the scope is narrowed down to exploring English for medical purposes and its teaching practices. It sheds light on the multi-focus syllabus, its content and how it serves English for medical purposes.

1.3.1 English for Medical Sciences

English for Medical Purposes is regarded as a sub-branch of English for Specific Purposes (see section 1.2.4). English as the language of globalization has become the necessary tool for communication and the main language for all sciences. The use of English in the scientific world is steadily increasing, and most specialized medical literature is published in English (Piquet et al, 1997). Studies conducted among Healthcare professionals (Maher, 1986; Master, 2005) have concluded that English is the international communication vehicle. Medical English covers the language used in all healthcare sectors; Medicine, Dental Medicine, Pharmacy, Obstetrics (Raynova and Trendafilova, 2013) and Nursing care.

This research study is concerned with teaching English for the Pharmacy which is considered as a sub-category of English for medical purposes (Bruton and Wozniak, 2013). Although English for Pharmaceutical Purposes (EPP) exists in the ESP

literature (Del Vecchio, 2012; Grabowski, 2015), it is a label which applies to a language course that deals with, “the description of vocabulary and phraseology used across different pharmaceutical text types and genres” (Grabowski, 2015: 209).

Currently, there is limited availability of literature on specific teaching guidelines for EFL Pharmacy students. A number of studies (Garcia Mayo, 1995; McDonough and Bennett, 2006; Stupans et al, 2009; Raynova and Trendafilova, 2013) have investigated the teaching techniques and methods for Pharmacy students whose first or second language is English or who are confronted with situations which require the use of English language and communication skills. Although the present research is undertaken with EFL learners in an Arabic-speaking environment (Algeria) where English is not used in the community, studies on EMP teaching in an English-speaking environment can be valuable, since, “most linguists, methodologists and teachers of English believed that the learning of a foreign language should be the same as the acquisition of the native language” (Raynova and Trendafilova, 2013: 571). This implies that the teaching content and methodology applied in an English-speaking Pharmacy context may work, to a certain extent, with Pharmacy students from a non-English-speaking context.

Studies on health care academic and professional settings insist on the necessity of learning English so as to know how to use language in domains where medical students and professionals are going to study and work. In medicine, English has become widely used and the number of English publications is increasing significantly (Pavel, 2014; Master, 2005 in Molhim). Having a good proficiency level in English has become a ‘must’ for health care staff so as to enable communication amongst specialists of different countries. ESP nowadays, as explained by Popa (2013) is oriented towards mastering skills for professional communication. However, the EMP teaching objectives may differ according to the students’ target situation and language needs. It should be noted that knowledge of both general English and ESP is required in the medical field in order to assure the learner’s progress in science and workplace.

1.3.2 Teaching English for Medical Purposes

Following Priorito's (2005: 2) perspective arguing that, "ESP combines subject matter and English language teaching", EMP teaching focuses mainly on medical discourse which uses specific terminology and language tasks related to medical practice in order to achieve a communicative purpose. Depending on the level of the students, the teacher designs or adapts the course content. Different EMP studies (Molhim, 2011; Pavel, 2014) have found that for low proficiency level students, there must be a focus on first developing their ability to use the language of everyday English and develop the four skills in general, also on the ability to understand and employ medical terminology so as to communicate in a medical environment can be fostered subsequently. The teaching goals, the foundations of the course, can be further determined after a thorough needs analysis has been conducted.

1.3.2.1 Team Teaching

An important concept to be highlighted when introducing EMP teaching is team-teaching. It was noticed by Carnet and Charpy (2017) that there is discordance between ESP teachers' knowledge in specialized discourse and the interactional professional discourse, manifested in the sociolinguistic conventions of medical professionals. This fact highlights the need for collaborative work between ESP teachers and medical professionals, referred to as "bridging the gap between Medical English and English for Medical purposes" (ibid: 47). Similarly, Bruton and Wozniak (2013) emphasize the complementary work of subject specialists in producing better results in the pedagogical English-speaking environment, in the case of the EMP classroom environment. The contribution of the content instructor is noted by Orr (2002) in an EMP course designed for nurses learning English, where the input of the nursing instructor was paramount in the design of an effective final product which incorporates content areas related to medical topics ,as well as linguistic and communicative features.

1.3.2.2. The Importance of Needs Analysis

The ultimate goal of an EMP course is to address the learners' specific needs whilst enhancing their interest and motivation. Thus, a needs analysis explores academic as well as work-related needs in the medical field. It determines the amount of specialized content that should be included in the syllabus as the, "the inclusion of content in any ESP course is important" (Cozens, 2006: 14). It should be conducted with extreme care as it plays an important role in the selection and delivery of EMP course components (Bosher and Smalkowski, 2002).

Common characteristics of medical learners' needs analyses include communication (ibid; Stupans et al, 2009), special terminology, multilingual vocabulary, (that is, words, some of which are terms, found in several languages in phonetically, grammatically and semantically similar forms) (Laar, 1998), medical discourse and language skills (Stupans et al, 2009). Garcia Mayo (1995) conducted needs identification for an ESP Pharmacy course at the University of the Basque country using interviews with Pharmacy specialists and addressing a questionnaire to Pharmacy students. All the informants answered unanimously, emphasizing the importance of reading and writing as, "they may need to exchange information via manuscripts to International journals [...] and update information about new developments in their relevant research areas" (p. 86). Speaking and listening skills are regarded as essential for students' future professional life.

1.3.2.2.1 Needs Analysis within an Arabic EMP Context

There is a serious lack of ESP research within the Arabic speaking ELT context (Molhim, 2011). A study in the UAE focused on the concept of communication-oriented teaching, particularly oral communication and fluency, particularly in relation to construction of meaning (Ibrahim, 2001). With regards to English language proficiency, Arab students need to improve their language level so as to cope effectively with their field requirements (Zoghoul and Hussein, 1985

in Molhim). For this reason, General English and specialized language should be meticulously linked so as to ensure that the EMP course offers a range of general English skills as well as the required amount of Medical English. In the Algerian context, two published studies on teaching Medical English were recorded: a Masters' dissertation on the role of the ESP teacher in a Paramedical context¹, and a paper on the implementation of an ESP course for Medical students².

1.3.2.2 Needs Analysis in the Algerian Context

The Algerian ESP context is different from any other English-speaking environment. Although, “pharmacists need to be able to communicate both verbally and in a written format with people in the community, colleagues and other health professionals” (Stupans, 2009: 6), Algerian Pharmacy students and professionals are not frequently confronted with situations where they have to communicate verbally in English. Nevertheless, the needs analysis will pose questions such as, “What knowledge and abilities will the learners require in order to be able to perform to the required degree of competence in the target situation?” (Hutchinson and Waters, 1987:60), as the main concern of any needs analysis. Therefore, the steps to be undertaken to conduct a needs analysis among Pharmacy students in the Algerian context, are based upon the notions suggested by Hutchinson and Waters (1987), following a learning-centred approach, that aim to enhance the students' linguistic and communicative skills.

1.3.3 EMP Course Design: Contents and Skills

Unlike ESL teaching where English is considered as a foreign or second language, the “S” in ESP denotes the meaning of specialized content or, as Hadley (2006:03) mentions, “specialized language and practice”. It should be noted that, “if a subject such as medicine is taught in English, this is not in itself ESP teaching; it is

1 Rdjaimia, A.R. 2015/2016

2 Allouche, W.S. 2011/2012

content teaching” (Javid, 2012), because ESP involves the teaching of language and skills relevant to the needs and content knowledge of the ESP learners’ discipline. Similarly, the role of common core curriculum English, including general English, cannot be ignored in an EAP/ ESP environment. Dudley Evans and St John (1998: 42) demonstrate its function in the academic setting, together with Specific English, as follows, “the common-core EAP work makes more sense and is more relevant if it is supplemented by specific work”. However, students’ attitudes towards General English courses can affect their motivation, as reported by Cozens (2006 cf. Gvardjancic, 2001:8):

Languages at tertiary level are often treated as second-rate subjects. This situation is reflected in students’ attitude towards language as a faculty subject which they consider a necessary evil, but not linked to what they believe to be their genuine study program.

Therefore, Content-based instruction can be a source of motivation for medical students as it offers a favourable environment for language use and skills development. Still, Resche (1999:71 quoted in Gledhill & Kubler, 2016) insists that, “specialized language should be closely linked to general language [...] the fact that is now commonly accepted. Thus this expression is preferred today in order to emphasize the idea of a continuum, not that of a break”.

Study skills and relevant vocabulary also constitute an integral part of ESP content in general and EMP in particular. Chowdhury and Haider (2012) report, according to the Longman Dictionary, that study skills refer to abilities, techniques and strategies used when reading, writing or listening for a specific purpose. Another definition is offered by Jordan (1997), referring to this concept as the combination of productive and receptive skills, with the former including speaking and writing tasks and the latter comprising listening (note taking) and reading assignments. “The receptive skills are seen as necessary inputs to the productive skills, with each receptive skill having its place with each productive skill, depending on the appropriate study situation or activity” (ibid: .6-7). In medical contexts, students as

well as professionals need to improve these skills to be able to perform well in a given situation.

Vocabulary knowledge is part of the ESP content. Nation (2001) argues that it affects students' language skills performance because lexical items convey meanings that the students need for comprehension and expression. This component is measured according to how well language learners know a lexical item for use in different contexts (Nassaji, 2004). Vocabulary acquisition includes different dimensions, such as pronunciation, spelling and semantic features (synonyms, antonyms). Hsu (2013:257) suggests classifying vocabulary words into three categories: technical, semi-technical (defined as "lexical items that are neither specific to a certain field of knowledge nor general in the sense of being everyday words", p. 257) and non-technical. For this reason, there should be a balance between general English and content-based language focus (Javid, 2012), especially in medical courses (Molhim, 2011).

1.3.4 Multi-focus Syllabus for Pharmacy

To design an EMP course for Pharmacy students, the ESP teacher should be well-equipped with pedagogical content knowledge and choose the appropriate syllabus. The aim of the course design is to equip students with the necessary skills to help them operate effectively in their area of specialization, at both academic and professional levels. In the current research the multi-focus syllabus was selected as a fully inclusive approach that appeals to different learning preferences and creates an effective and exciting language classroom. Moreover, Yalden (1987:18) emphasizes the notion of a "multi-focus" view of teaching in non-speaking English environments, stating,

In order to include consideration of all these components of language and communication, and to provide opportunities of language development in each area, we must greatly expand the complexity of syllabus design. In so doing, the linguistic component loses its predominant position and syllabus design for language learning takes on a different shape.

The idea of eclecticism in syllabus design sprang from the academic context and workplace language requirements. There have been many suggestions in regards to the fusing of the elements from various different syllabus models (Clarke, 1991). The major requirements of syllabus design are to incorporate a variety of elements: structure, function, situation, topic and skills with respect to the choice of priority. In other words, the multi-focus syllabus does not mean a simple combination of language elements (Danni, 2013); rather it is a matter of priority considering the demands of students and target situation requirements

Following a multi-dimensional approach to teaching favours the students' involvement in the learning content. The instructor can use the 'Socratic' method to encourage students' participation in class. The key point in this method is that the construction of interactive dialogue between teacher and students helps to foster reasoning and critical thinking skills (Delić and Bećirović, 2016).

The multi-focus syllabus addresses a variety of elements (Orwig, 1999) which makes it suitable for Pharmacy students to help them reach communication. It is "a two-pronged approach, which focuses on structures and vocabulary to build up general linguistic knowledge, while, at the same time, concentrating on meeting immediate communicative needs and on building up sociolinguistic and pragmatic competence" (*ibid.* 15-16). This approach offers a communication-oriented instruction of English for Pharmacy students, to enable learners to foster their linguistic knowledge and skills to build communicative competence. It is worth mentioning that EMP courses aim at enabling the learners to understand terminology and medical discourse, and to enhance their linguistic and "oral and written communication skills" (Antic, 2007: 142). EMP

courses are intended to prepare today's students and tomorrow's pharmacists to communicate in English in academic and workplace settings.

1.3.5 Multi-focus Syllabus to reach Communication

Communication started from ancient times where Aristotle (384-322 BC) focused on oral skills and wrote about rhetoric (techniques of persuasion to develop public speaking), and this has been developed on, to embrace all domains in today's world. Widdowson (1978) emphasizes the notion of communication in language teaching and demonstrated that language acquisition occurs to fulfil a communicative purpose; that is, learners produce and comprehend written and oral texts in order to communicate. Similarly, Ruetz (1996) states that communication does not solely refer to oral performance, but embraces reading, writing, speaking and listening. Thus, good English language skills underpin good communication in English.

Richards (2001) introduced the starting point for communication as the threshold syllabus which specifies topics, functions, notions, situations as well as the grammar and vocabulary needed to help ESP students communicate in a specific situation. Communication skills, referred to by Widdowson (1978:67) as communicative abilities that embrace linguistic skills, are considered to be the medium through which the language is manifested; i.e., a good performance in the four language skills, reading, writing, speaking and listening promotes communicative abilities. In this respect, EMP strives to equip the learners with the necessary skills through which they will most likely be introduced to a globalized world, where they can become more fluent communicators and empowered pharmacists, and can contribute to healthcare within an international perspective.

1.3.5.1 Verbal versus Non-Verbal Communication

The concept of communication can be interpreted from different perspectives. With regards to interpersonal relationships, both verbal and non-verbal communication are important abilities in job-related situations. Being aware of effective

communication skills;, such as, good listening behaviour and constructive feedback (verbal), gestures and eye contact (non-verbal), helps medical professionals, including pharmacists, to perform their tasks successfully and to increase their social and interpersonal competence within their community.

The notion of communication has been the subject of various research articles related to EMP course design (Antic, 2007; Molhim, 2011; Gass, 2012; Popa, 2013; Pavel, 2014) involving communication of information within a multi-linguistic community or in scientific meetings among medical professionals. Hasan (2008), in his study conducted in Sharjah at the college of Pharmacy, explores communication techniques that improve interaction between pharmacists and physicians. The multi-focus syllabus for this study designed for Algerian Pharmacy students is intended to build up Linguistic skills and knowledge for the purpose of improving students' communicative abilities (Widdowson, 1978) and meeting their language needs. Hence EMP materials are selected to meet that aim.

1.3.5.2 Teaching Materials and methods: Developing ESP materials and activities

The selection of materials for ESP learners should underline the lesson objectives. As the teacher proceeds in selecting or developing teaching materials, s/he needs to make sure that they reflect, "What he thinks about the learning process" (Hutchinson and Waters, 1987), since teacher reflection on the learning process plays an important role. In addition, these materials should match the different learning situations. Teachers should be creative, adopting or adapting a given material to serve a specific learning situation. For instance, the type of reading materials should be adjusted according to the level, field and interest of the students. If the text-book provided for a given field does not thoroughly meet the designated needs, "In-house materials are much more valid since they are tailored according to the specific needs of learners", (Robinson, 1991:56). The teacher strives to provide effective materials that should be based, "on various interesting texts and activities that provide a wide range of skills" (Hutchinson and Waters, 1987:45).

It is important to plan activities and exercises to be as dynamic as possible, to keep students motivated (Dejong and Perdomo, 2016). The exercises are distinguished by their capacity to include a wide range of skills and language practice related to students' field of studies. They should be designed to make learning pleasant and create a positive learning atmosphere. Types of activities include: gap filling, comprehension multiple choice questions, reading texts in group, group work for problem solving...etc.

Students specializing in medical studies should be equipped with texts, tasks and activities which fall within the remit of medical practices. Needs analysis, which forms, "the foundation on which we can develop curriculum content, teaching materials and methods" (Otilia, 2015:54) determines what kind of communication students need to master according to the linguistic features and requirements of the academic and professional settings. Materials should be designed or selected according to students' level. Mackay & Mountford (1978) state that it is evident, where science is taught in English or science reference materials are in English, that students need to acquire a considerably higher standard of language proficiency to enable them to comprehend and manipulate difficult intellectual material. For this reason, the learning process should be developmental, with careful selection of authentic material, respecting an increasing level of complexity.

1.3.5.3 Teacher Development and Teaching Methodology

The ESP teacher's knowledge is described as "a special amalgam of content and pedagogy" (Schulman, 1987). On the one hand, Subject-content knowledge is indispensable, to fulfil the needs of students and to meet the goals of the language course; on the other hand, it is important for the teacher to know which materials to select and how to use them, for the development of the course. Jaskova (2016) explains that content covers the topics of the students' subject area, whereas pedagogy refers to the means by which the content is made comprehensible. Therefore, teachers

should first address their content knowledge through three possibilities, as reported by Dudley-Evans (2001),

Cooperation (ESP teachers consult subject specialists about aspects of the specialist area), collaboration (ESP teachers and subject specialists work together outside the classroom to devise materials and tasks), and team teaching (ESP teachers and subject specialists working together in the classroom).

Second, the ESP teacher should be able to connect language teaching with pedagogy, that is, by teaching content through language by means of specific pedagogical techniques. Although there is no specific methodology designated for ESP, the instructor needs to develop a learning-centred approach that allows for an array of activities focusing on the aims of the course (Barrantes, 2009). ESP methodology creates an integration of subject learning and language learning (Dudley-Evans and St John, 1998). The following model portrays ESP teacher knowledge development.

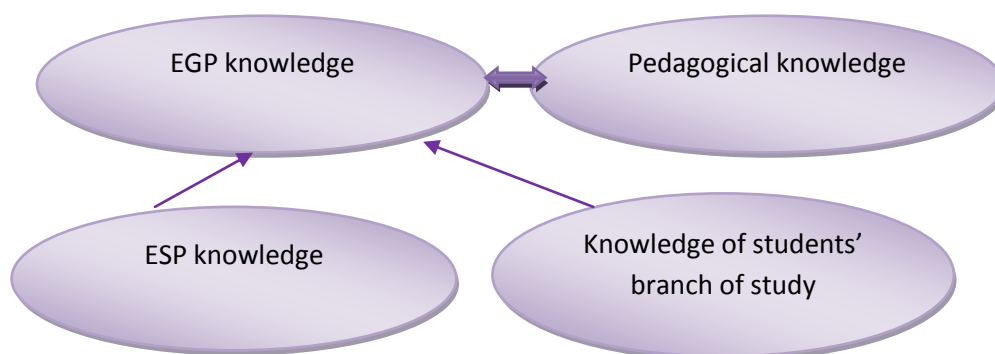


Figure 1.3 Knowledge development for the ESP university teacher (adapted from Jaskova, 2016)

1.3.5.4 Authenticity- EMP and real-life contexts/ situations

ESP instruction must be characterised by authenticity (Antic, 2007), to promote communication and facilitate language acquisition. Authentic activities supply learners with opportunities to develop knowledge, “embedded in the social and physical

context within which it will be used” (Herrington et al., 2010, p. 15). Ozverir et al (2017) state that a problem-solving real-world task makes the learners use their potential and work collaboratively with their peers to suggest a solution.

EMP courses should include interesting and authentic texts, pictures, topics and tasks related to the medical field and content area of the students. It has been reported in the literature (Molhim, 2011; Pavel, 2014; Antic, 2007; Stupans et al, 2009) that EMP instruction does not follow a specific method or practice, rather, it allows a wide range of techniques to make learning enjoyable and successful. Engagement of students in interactive language tasks, such as simulations and role-plays, which are closely related to real-life work situations, accustom students to the professional medical environment.

1.3.5.4.1 Activities and Language Communication Tasks

The Common European Framework (CEFR) defines a task as basically “any purposeful action considered by an individual as necessary in order to achieve a given result in the context of a problem to be solved, an obligation to fulfil, or an objective to be achieved”. The task comprises activities and fosters several skills. It includes, for instance, a reading text followed by group discussion to develop students’ ability to carry out similar real-world tasks with effective use of language.

Creating contexts for communication and linguistic knowledge development results in a more engaging atmosphere which, “enhances the student experience with positive learning outcomes” (Hussainy, 2012). Communication in the EMP course is manifested through TBLT (Faure, 2003; Pavel, 2014), which consists of implementing communicative activities that are mainly based on the integration of skills; namely reading, writing, speaking and listening (Widdowsson, 1978). According to Master (2005), EMP courses are characterized by delivery of specific topics, grammar and terminology, which can be integrated within communicative tasks required in the medical context, such as by use of role-plays and simulations. This can be put into

practice by engaging Pharmacy students in communicative tasks, like pharmacist-patient dialogue to seek advice or enquire about the side-effects of medicines.

The ESP teacher works on reinforcing students' acquisition of the skills and knowledge necessary for achieving their goals, by means of use of tasks related to medical practice and health-related themes: Physiology, Pharmacology, Anatomy, etc. As a facilitator and advisor, the instructor orients students on how to transfer their knowledge of medical subjects to the English course (Antic, 2007), leading them to increased learning autonomy.

1.3.5.4.2 The Use of Narratives

The use of narratives in a learning context plays a pivotal role in expanding students' horizons. As stated by Wright (1996), "we all need stories for our minds just as much as we need food for our bodies", and Narrative is a fundamental structure of human meaning-making (Bruner 1986). Therefore, one more effective way to help learners grasp meaning is through narrative construction. It helps create and discover meaning in a memorable way (ibid). Pedagogical content can be taught as a narrative text to leave space for students' interaction and reflection (Rossiter, 2002; Szilas et al, 2015). Narration in the classroom is presented by the teacher or students to emphasize specific terminology and grammar structures. In this respect, the narrator relies on his/her, "pitch, tone of voice, gesture, pronunciation, and some other speech features", (Yang, 2011: 9) to influence the audience and raise their awareness of meaning and usage in context.

There are ample theoretical grounds and empirical studies for the impact of narratives on the EMP learner's performance both within and beyond the academic context (Easton, 2016; Maleki and Sajjadi, 2012). Besides meaning-making (ibid), it is believed that this teaching approach (Maleki and Sajjadi, 2012; Yang, 2011) helps promote vocabulary retention, improve communication skills and foster involvement in the language classroom (Hunter, 1991; Easton 2016). It also assists healthcare professionals towards a better understanding of patients and co-workers (Marthouret,

2016). However, a constant problem among ESP teachers involves the question of how to raise students' competence in using domain-specific vocabulary appropriately (Grabowski, 2015). This can be solved by application of a storytelling technique which strengthens memory (Rossiter, 2002; Maleki and Sajjadi, 2012), so students are more likely to remember the facts, vocabulary and terminology to describe a certain pathological or medical state.

“Story” is a particular type of narrative which, “entertains, instructs, and makes key information more memorable” (Alsop et al., 2015: 1). Although the word “story” may have connotations of relating to early schooling, it has been confirmed that stories are actually suitable for all ages (Nazir, 2012). The storytelling function is designated to accommodate the narrative mode (Plaks, 1977). When telling a story, students are communicating verbally which makes them more able to internalize information (Hasan and Abdelaziz, 2012). Easton (2016) in his study within a medical context concluded that storytelling appears to be a valuable learning tool in Medicine as it can bring abstract principles to life by giving them concrete form (Green, 2004). If a complex medical phenomenon or concept is put into a story format, as Pennebaker and Seagal (1999) state, the mind does not need to work hard to bring meaning to it. For instance, the instructor may create a story to include new terms as follows:

*....I'm feeling so **nauseous** and I'm afraid of walking alone. I have to go to the nearest Pharmacy.*

*“Do you have a **headache**?” “Yes, (the man replied), a severe headache with some fever. I think this is due to my **high blood pressure**.”*

*Pharmacist: “Regarding the **symptoms** you have, I will give you an **antiemetic**, called ‘**MOTILIUM**’. The old man did not understand so he asked for clarification ...”*

*Pharmacist: “It's a medicine that treats **nausea**; and if you are not **vomiting** after the second hour, make sure that you continue to drink enough water to prevent **dehydration**”*

Beaupoil-Hourdel et al., 2017 assert that storytelling as a powerful educational tool can introduce the dimension of pleasure into academic reading; it will, therefore, have a positive impact on students' ability to assimilate medical knowledge in comparison with traditional reading approaches.

1.3.5.4.3 Role-play and Simulation

ESP is known as a learner-centred and content-based approach to teaching English as a foreign language, to fulfil the learners' needs and make them use the language adequately in their specific fields (Hutchinson & Waters, 1987). Role play and simulation, can therefore serve as authentic and useful tasks to provide a space for constructive learning. Role play in a medical context fosters communication and collaborative work (Adrian et al., 2015). For student pharmacists, dealing with patients with care, and working cooperatively with health professionals is pivotal in their future career. Therefore, Rao (2011) reports that role-playing tasks enhance communication skills and help develop patient-care skills and information collection.

Simulation clearly relates to communicative language acquisition. The learner has the chance to initiate as well as to respond in communicative exchanges where s/he is able to interact, by using a full range of grammatical-semantic notions and communicative functions, giving an impetus for real-world communication (Garcia-Carbonell et al., 2001). It has been defined by Al-Elq (2010) as the artificial representation of a real world process to achieve educational goals via experimental learning. From an EMP perspective, it was suggested by, "various authors to conduct ESP courses as close to the workplace as possible" (Stojkovic, 2015). Similarly, Crandall (1984) proposes turning the classroom into a simulated workplace so as to help students focus on specific skills they would later use in the occupational context. Fejzic and Barker (2015) note that it is imperative for Pharmacy practice to embrace communication, so simulated learning is suggested to assist pharmacy students acquire communication skills, such as by acting as pharmacist and patient within the classroom.

1.3.5.4.4 Video Instruction

Teaching through videos or films is interesting and useful in the ESP classroom. It should be noted that inclusion of movies related to the healthcare domain would be beneficial and interesting for students; however, there should be a minimum proficiency level required for students taking part in content-related activities (Yogman and Kaylani, 1996). Petit (1999) introduced (FASP), which stands for “Fiction à Substrat Professionnel” (fiction with a professional substratum), that serves as a pedagogical tool in specialized language acquisition. The concept was further explained by Franklin-Landi (2017: 153) as, “it focuses on the use of a clip from a medical television series and how it was used in the classroom to reinforce good medical practice through the identification of on-screen procedural problems. Shi et al. (2001) clarified that the use of videotaped data is regarded as authentic teaching material which engages students in the learning process, thereby enhancing their motivation levels.

1.3.6 EMP Course Components

1.3.6.1 Vocabulary Instruction and Medical Discourse

EMP is regarded as a branch of ESP dealing with the medical discourse which is, “a particular terminology employed to effectively and accurately achieve a communicative purpose in health care settings” (Gyls & Wedding, 1983). The starting point in any medical course design is the presentation of the vocabulary - which is the basic element of the language acquisition.

English for Medical Purposes puts special emphasis on terminology. For a better assimilation of vocabulary items, it is necessary to understand the word before memorizing it. To reach full comprehension, “It would be better to help the student disjoint the word component parts” (Antic, 2012:2), using structural analysis, and sort out its root and affixes. In this respect, Yang (2005) states two main aspects that characterize medical terminology:

- Apart from the one-syllable words, most medical words consist of roots and affixes. The affixes can be classified into prefix and suffix. Any single medical term has at least one root determining its meaning and one or more prefixes and or suffixes which alter the part of speech or the meaning of the root
- Medical vocabulary is not a closed rule-governed system, but an open system consisting of a large number of low-frequency words and newly created words

It is also noticed that there is an extensive use of acronyms and abbreviations in the medical discourse; such as, ‘AA’ which stands for Amenia Acid.

Most of the medical vocabulary words are originated from Latin, or *Lingua Latina Medicinalis*, and Greek (Molhim, 2011; Antic, 2012; Pavel, 2014), which are needed in EMP vocabulary instruction. As stated by Kennedy and Bolitho (1990), knowledge of Latin and Greek represents a necessary tool for vocabulary acquisition in an ESP environment. Jaseem (2015) also highlights the Arabic origin of medical terminology. Paying special attention to how the words are formed facilitates comprehension of pharmaceutical terminology and enables students and pharmacists to use items appropriately in pharmaceutical practice.

1.3.6.2 Grammar Patterns in EMP Discourse

According to a number of studies investigating ESP teaching and learning among medical students in the Arab World (Molhim, 2011; Ibrahim, 2001; Rahim 2005) the notion of communication and fluency in the EMP course should outweigh accuracy, but retaining some sense of balance. With regards to grammatical constructs, it has been stated in the research literature that there are common and specific grammar points to be emphasized when designing a syllabus for medical studies. Firstly, the most frequently used tenses are the present simple and past simple (Antic, 2007; Pavel,

2014; Faure, 2003). The former is widely used when describing processes and mechanisms or asking questions, as illustrated by Pavel (2014):

- *The posterior part of a vertebra forms a vertebral arch and this consists of two pedicles, two laminae and seven processes.*
- *The stomach secretes protein-digesting enzymes called proteases and strong acids to aid in food digestion.*
- *Tuberculosis typically attacks the lungs, but can also affect other parts of the body*
- *Do you have any breathing difficulty?*

As for the past simple, it is employed to take medical history and talk about actions in the past that have finished. In addition, the present perfect may sometimes be used when asking about or relating the beginning of an illness, or when students write research articles and refer to findings, and recent or previous studies done in the field, such as:

- *“Studies have shown that the overall population levels of bacteria are unchanged” (ibid).*
- *How long have you been suffering from back pain?*

Another feature of the medical discourse is the passive voice, which is frequently used because the form is impersonal and objective. EMP is also characterized by prescriptive phrases, to indicate certainty (the indicative), and with the use of imperative functions (Bleakley, 2017). The employment of modal verbs is significant for hedging³ which represents possibility rather than certainty (Hyland, 2000 quoted in Antic, 2007), and is widely employed in medical discourse; an example of this might be, *‘these findings could suggest the following interpretation’* instead of *‘these findings suggest’*. Modal verbs are also used to

³ Hedges are used to soften and make conversation more polite

express the sense of obligation and permission, for instance, ‘*you may take this anti-inflammatory whenever you feel headaches*’ or ‘*you must take this medicine for your high blood pressure*’.

1.3.6.3 Focus on Reading Comprehension

ESP studies encourage teachers to improve Pharmacy students’ English reading comprehension (Fukuda, 2017). Developing reading techniques is one of the most required competencies in medical studies. Despite its significance, many ESP students demonstrate minimum comprehension when dealing with reading materials related to their specialty (Frydenberg, 1982; Omar, 2014; Khashsima & Samani, 2015). Hence, researchers in the field have acted on this by implementing reading strategies that are likely to bring about proper comprehension, as illustrated by Garcia Mayo (1995:92), “inference, predicting, skimming, scanning...etc. that will allow the students to assess the information conveyed in the texts and to do the the combination of *reading and writing skills* (summary writing, note taking in lectures and video sessions...)”.

1.4 Conclusion

This chapter, firstly, has examined the field of ESP and its tenets, including the teaching process and its practices. The various norms that are of concern in ESP instruction have also been tackled, summarising that reliance on a variety of methods break the monotony of classroom practices and renders the atmosphere more relaxed and enjoyable.

It was noted from the literature that communication plays a pivotal role in the life-long learning process of Pharmacy students and professionals. Empirical studies also shed light on the importance of empowering students through the use of relevant materials, and involving them in authentic tasks to enhance their reading comprehension abilities and vocabulary knowledge.

English for Pharmaceutical Purposes (Del Vecchio,2012), as part of English for Medical Sciences, seeks to fulfil the learners’ objectives in the academic and

workplace setting. The following stage in this work describes how the needs analysis was conducted among undergraduate and post graduate students, subject specialists and the English teacher, to unveil the students' needs and determine the requirements of the target situation.

CHAPTER TWO

SITUATION ANALYSIS AND RESEARCH METHODOLOGY

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2.1 Introduction

The present chapter investigates the ESP teaching situation in the department of Pharmacy at Blida 1 University, and in the associated work place setting. Also, it deals with the research method and design followed in the current study. In the first part, an overall description of the Faculty of Medicine in general is provided, and then the focus is narrowed down to the Department of Pharmacy. Subsequently, a thorough explanation of the status and the importance of the English language within this department is provided. Furthermore, the importance and utility of English in the professional setting is investigated.

The second part of this chapter deals with the research methodology adopted in this study. It sheds light on the research design and procedure, as it gives a detailed account of the sample population under investigation and the selected research tools. This study sets out to determine the students' needs for learning English, to point out the language skills and components that are most needed in the academic and professional context and to design a multi-focus ESP syllabus that would generate a more communication-oriented language teaching and learning. Consequently, a case study is used to conduct a needs identification and analysis, followed by action research to implement the suggested syllabus. Furthermore, a full description of the data collection procedure and data analysis is given in this chapter.

2.2 Situation Analysis

Prior to any research investigation, it is of utmost importance to explore and describe the environment in which the study will be conducted and shed light on the main factors that affect the teaching and learning of the English language within the Department of Pharmacy. Yet it would be premature to deal with the problem before describing the situation ahead. The aim behind analysis of the situation is to describe the ESP teaching within the medical faculty in general and in the Department of Pharmacy in particular. To introduce the description of the faculty

and department the researcher shall first give overview of the University where the study was conducted.

2.2.1 The University of Saad Dahlab – Blida 1

When Saad Dahlab University was founded in 1981 there were only four specialties offered that students could be enrolled in: Architecture, Agronomy, Technology and Medical Sciences. Besides, it was considered as “centre universitaire” and was affiliated to the INESSM of Algiers. Afterwards, in 1989, it was declared as an independent university and new streams were added, such as, Aeronautics, Electronics and Chemical Industry. In 1995, the university offered the following specialties: Veterinary Sciences, Law and Administrative Sciences, Economic Sciences and Foreign Languages. An institute was created for each specialty, which paved the way for the new structure of the University, comprising seven faculties, as presented in following figure:

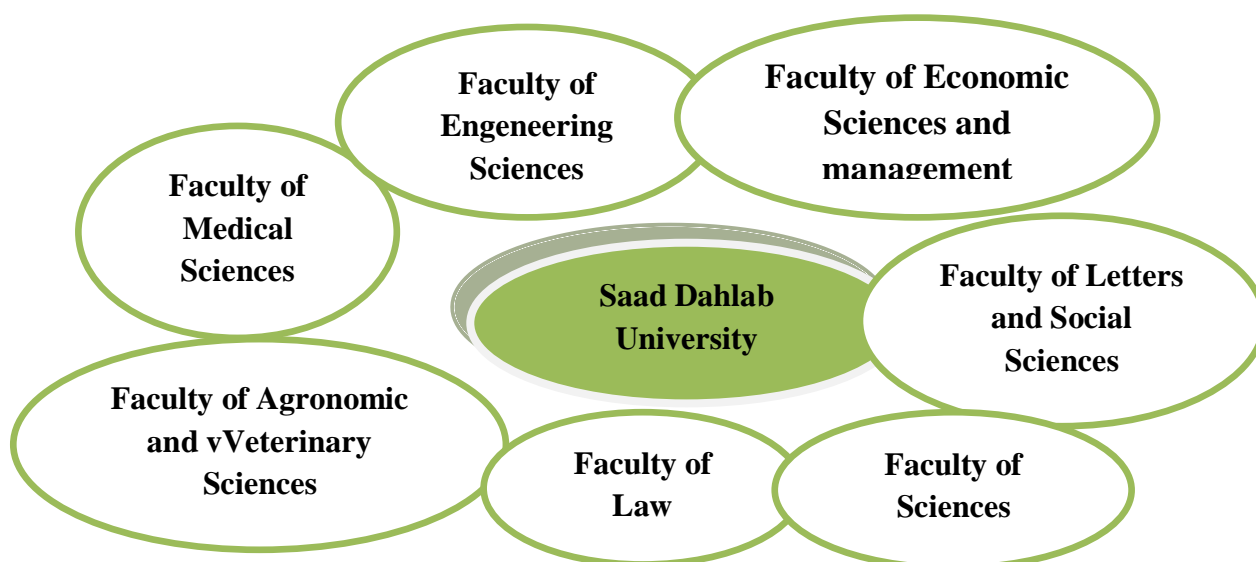


Figure 2.1 Faculties and Institutes in Saad Dahlab University

However, this structure was altered when a second university (Blida 2) was established in Blida, in 2011. Three faculties, such as Law, Economic Sciences, and Letters and Languages, were moved to the second university. However, the Medical Sciences Faculty, which is nowadays called the Faculty of Medicine, is still in its

initial location. Consequently, Saad Dahlab - Blida 1 University structure was changed and was divided into four faculties: Medicine, Technology, Sciences, and Life and Natural Sciences and three institutes: Veterinary Sciences, Architecture and Urbanism, and Aeronautics and Spatial Studies (1). The following figure illustrates the structure:

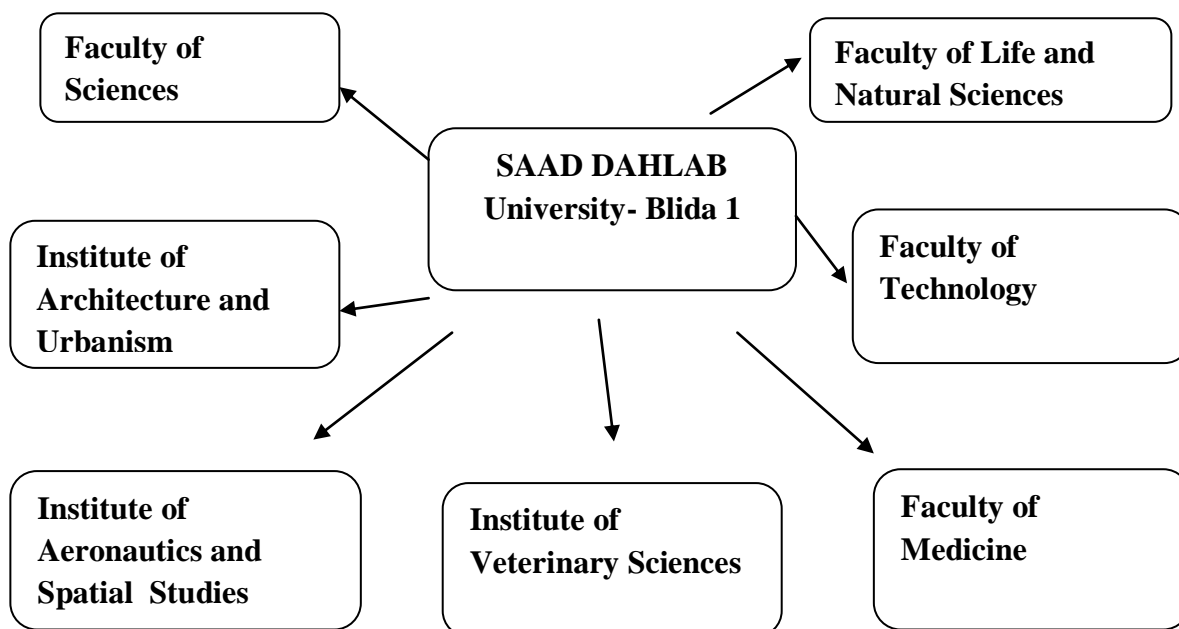


Figure 2.2 The New Structure of Saad Dahlab - Blida 1 University

2.2.2 The Faculty of Medicine

As the university opened its gates for the first time in 1981 medical sciences courses were offered to students coming from different wilayas (Medea, Blida, Chlef, Djelfa and southern wilayas). In 1989 the institute for Medical Sciences was created and then established as the faculty of Medicine nine years later (1998). It constitutes one of the seven faculties of Saad Dahlab University. This faculty, as shown in the figure below, comprises three departments and each department has its sub-specialties.



Figure 2.3 Departments in the Faculty of Medicine

2.2.2.1 The Status of English in the Faculty of Medical Sciences

The paramount importance of the English language in the health sector, and the necessity to prepare students for academic and professional communication, propel the need to investigate the status of English in the medical context. The English course is included within the programs of Medical Sciences, but not at all levels, as displayed in the following table.

A. y Disciplines	First year	Second year
Medicine	Genetics, Chemistry, Biophysics, Anatomy, Biochemistry, Physiology, Histology, Biophysics, Cytology, ICT, Biostatistics, <u>French</u>	Physiology, Biochemistry, Anatomy, Histology, Biophysics.
Pharmacy	Biostatistics, General Pharmaceutical Chemistry, Organic Pharmaceutical Chemistry, Cellular Biology, Vegetal Biology, Pharmaceutical Physics, Anatomy, Physiology, Social Sciences, <u>French/English (S1/S2)</u>	Biophysics, Pharmaceutical Chemistry, Pharmaceutical Botanic, Mineral Chemistry, Genetics, Structural Biochemistry, Physiopathology, <u>English (S2)</u>
Dentistry	Chemistry, Biochemistry, Physics, Biophysics, Biostatistics, Anatomy, Histology, Genetics, Cytology, Social Health (S2), <u>French/English (S1/S2)</u>, Cellular Biology, Organic Chemistry (S2),	Odontology, Human Anatomy, Dental Anatomy (S1), Prosthesis, Orthopedics, Periodontology (S2), Dental Pathology (S2), Biomaterials, Histology (S1), <u>English (S1)</u>, Microbiology, Hygiene and Prevention (S1), Immunology (S2), ICT, Physiology (S2).

Table 2.1 Occurrence of English in Medical sciences programs

The English language teaching in the faculty of Medicine is offered to students who pursue degrees in Pharmacy and Dentistry in their first and second year (see Table 2.1). Students enrolled in Medicine are provided with a course in French as a

foreign language (as underlined in the table 2.1), due to its use in the Algerian context. The English course is delivered to Pharmacy and Dentistry students, taught by one teacher, and is the same for both groups.. The topics dealt with in the English class are usually related to Medical Sciences in general; however, specific vocabulary is taught for each field to help students broaden their lexical knowledge in the area of specialization

Among the three fields of Medical Sciences, it is worthwhile investigating the English teaching and learning situation in the Department of Pharmacy for many reasons. First, the absence of the English course for Medicine students prevents any possibility of conducting a study in this context. Unlike Pharmacy, the Dentistry department does not offer a post-graduate program. Students wishing to pursue their studies after graduation need to seek post-graduate programs in other universities. Moreover, after graduation, dentists are not offered a variety of jobs to choose from, in Algeria; they can either work in medical offices or be affiliated to hospitals. These careers fit into the clinical practice, but not in the industrial one. This fact does not allow a needs analysis process to be conducted to explore fully the subjects' attitudes in a variety of contexts; academic and professional. For this reason, the Department of Pharmacy was chosen to better explore the importance of the English language in the academic context and different professional settings where Pharmacists do not only work in hospital laboratories or chemists, but also in the field of Industrial Pharmacy.

2.2.3 The Department of Pharmacy

2.2.3.1 Overview

The department of Pharmacy was first created in 2001. Students can access this department after passing the Baccalaureate Exam with a high average (generally it's from 15.50 upwards, but it changes every year according to the direction given by the Ministry of Higher Education). The studies program consisted of five years, after which students get a degree in Pharmaceutical Studies.

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However, the system was changed at the beginning of the academic year of 2011. Currently, students enrolled in the Pharmacy program study for six years and receive a degree as Doctor in Pharmacy. Within the department there are 35 teachers who are either pharmacists or physicians, in charge of different modules. As far as the undergraduate syllabi for the six years are concerned, there are different modules, of which a number are designed as specialties in the post graduate program. The table below represents the modules for each year of study.

Graduation	Modules
First year	Biomathematics
	ICT
	Biostatistics
	Cellular Biology
	Organic Pharmaceutical Chemistry
	General Pharmaceutical Chemistry
	Physiology
	Vegetal Biology
	Descriptive Anatomy
	History of Pharmacy (human sciences)
	Foreign Language (French/ English)
Second year	Structural Biochemistry
	Biophysics
	Analytical Chemistry
	Pharmaceutical Botanic
	Mineral Pharmaceutical Chemistry
	Genetics

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	Physiopathology
	English
Third year	Analytical Chemistry
	Medicinal Chemistry
	Pharmacology
	Medical Semiology
	Pharmacognosy
	Galenic Pharmacy
Fourth year	Medical Biochemistry
	Medical Microbiology
	Parasitology Micology
	Immunology
Fifth year	Toxicology
	Hydro-Bromatology
	Epidemiology- Research Methodology
	Pharmaceutical Ethics
	Pharmaceutical Management
	Hospital Pharmacy
	Clinical Pharmacy
	Industrial Pharmacy
Sixth year	Trainings in the sectors of Industrial and Hospital Pharmacy

Table 2.2 Modules of the Undergraduate Program of Pharmacy

With regards to the post-graduate program in Pharmacy, it was first introduced to the Department of Pharmacy in 2014. After graduation, students have to sit for a test called “résidanat” or residency, which is usually considered as a national contest, in order to be eligible to pursue their post-graduate studies. When the students pass the test and are enrolled in any particular specialty, they are called Pharmacist Residents receiving special training within pharmaceutical laboratories and carrying out research. They may also apply for part-time teaching within the medical faculty. The following diagram displays the different specialties of post-graduation:

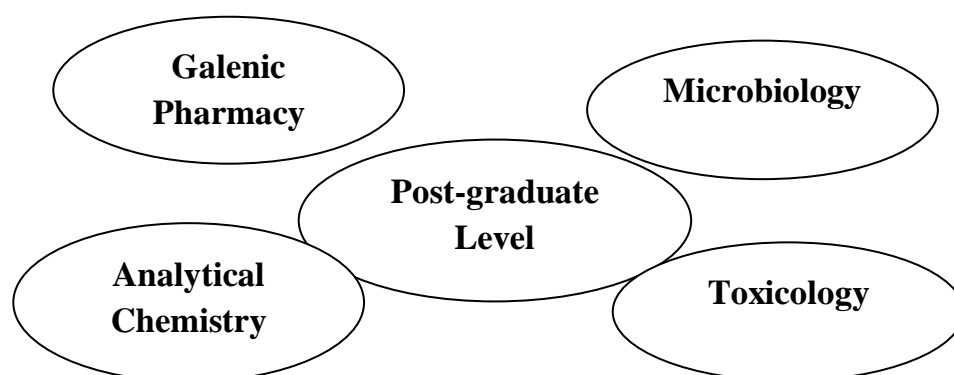


Figure 2.4 Specialties of the Post-graduate Program of Pharmacy

2.2.3.2 The Description of ESP Situation in Pharmacy Department

As reported by the Department’s academic authorities, the English language will improve students’ educational and professional prospects. In a Pharmacy career, Pharmacists are confronted with situations where they have to communicate through different forms; through an oral presentation, formal conversations, emails, phone call, any reading material... etc. for this reason, the language system has to be acquired to achieve a communicative purpose. According to Widdowson (1978), learning a language is not restricted to the ability of understanding, speaking and writing sentences, learners need to know how these sentences are used to

communicative effect. The English language teaching was introduced for the first time in Pharmacy Department in 2012, for the purpose of helping students to acquire the language and better understand and communicate any information related to their area of specialty. However, the teaching content and methodology have not been established on a basis of students' needs and target (academic or professional) situation requirements since needs analysis has not been conducted previously. Therefore, it is necessary to know the English teaching status in the Department of Pharmacy, to provide the final details about the situation where the study is conducted, and thus, to help determine the learning needs.

2.2.3.3 The Status of English Teaching in the Department of Pharmacy

Pharmacy students are enrolled in a six-year study program within which the English language is introduced as a unit in the second semester of the first and second academic years, that is, the second and fourth semesters. The nature of the teaching content varies from general to medical English, delivered to both levels without taking into account the appropriateness and relevance of the teaching material. In order to describe the teaching and learning situation in the Department of Pharmacy, it is important to consider the curriculum, the teaching time load and instructional materials

I. The Syllabus

As far as the teaching of the English language is concerned, the Ministry of Higher Education and Scientific Research provided the Department with a broad outline of the course content for any foreign language taught: French or English. The syllabus contains broad concepts for the language teacher to explore and design lessons accordingly (see figure 2.5). The items are as follows: Medical Terminology, Word Etymology, Phonetics and Production, Lexis of Proper Nouns. However, as it has previously been mentioned, due to the absence of needs analysis, the syllabus may be incomplete in terms of language components required for and needed by first and second year Pharmacy students.

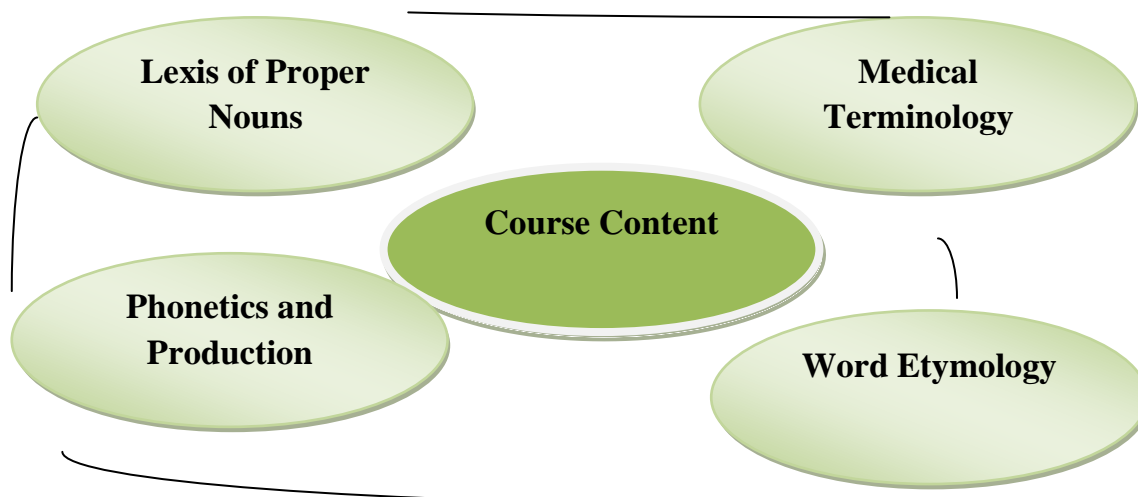


Figure 2.5 Foreign Language Course Content

II. *Description of the department*

In the Department of Pharmacy at Blida University, the time allocated to the English course for first and second year students is one hour and a half per week. The weekly English class is usually planned either as the last session of the day or the first on Thursday mornings. In regards to the instructional materials, the English teacher is not provided with any lesson plans, handbooks or guides. Therefore, s/he designs the lecture from web-based materials and uses the data projector to deliver the content.

2.3 Workplace Careers / Work Environment for Pharmacists

After graduation, pharmacists can either sit for the test of residency to be admitted to post-graduate programs or opt to build a career in any pharmacy related field. The pharmaceutical domain in Algeria is not restricted to the prescription of medication for patients; it is, rather, extended into a wider circle of professions. As reported by the head of department in an informal interview, since 2014 students graduating from the Department of Pharmacy are awarded a degree in Doctor in Pharmacy. Subsequently, they are employed as clinical pharmacists, community pharmacists or pharmaceutical industry pharmacists.

2.3.1 Clinical Pharmacy

Pharmacists working in hospitals or other healthcare settings are called clinical pharmacists. They are in charge of the local pharmacy; in other words, they ensure the availability of the required medications for patients within the medical institution. They also have other duties, such as, raising the doctors' awareness about the latest discoveries on a given drug, mainly its side effects; elaborating pharmaceutical protocols thoroughly; working on the efficiency of the prescription; and providing good quality pharmacy services (Calop et al, 2012). A clinical pharmacist is also concerned with helping senior patients to follow a prescription accurately.

2.3.2 Practicing Pharmacists

Community or practicing pharmacists work in drug stores or run their own pharmacies independently. They are in charge of prescriptions, verifying physicians' instructions, instructing and advising patients on the way they should take the prescribed medicines; also they may give vaccinations, such as flu injections. In addition to the previously stated tasks, community pharmacists have other administrative duties which consist of keeping records of insured patients, filling insurance forms and contacting insurance companies to work collaboratively with them. It is important to note that throughout their career they need to keep pace with the latest advances in pharmacological science.

2.3.3 Industrial Pharmacy

In the industrial domain, pharmacists work as medical sales representatives (or reps), technician pharmacists or as product managers in the marketing field. As far as the first category is concerned, their job involves the promotion of sales of medications among general practitioners, specialist doctors and chemists. They work in local or international pharmaceutical companies, attending meetings and organizing conferences, thereby establishing contacts with other companies. They also have to keep up to date with the latest clinical data and maintain knowledge of

the new developments in the Food and Drug Administration (FDA) service, just like product managers, who, additionally, deal with the development of new products. With regards to technicians, they work in different environments, for example, producing medicines in hospitals or supplying drugs in pharmacies.

2.4. Methodology

As a prerequisite for the commencement of any study, a detailed plan should be provided and thoroughly applied. The theoretical basis for any research is referred to as methodology. In this study it refers to, as stated by Burns and Grove (2003:488) as, “the design, setting, sample, methodological limitations, and the data collection and analysis techniques”. Therefore, it is of paramount importance to describe the research design followed, the sampling techniques, the data collection and analysis procedure and state any unfavorable conditions encountered in this research. In order to achieve a well-structured methodological process, the researcher selected the following model:

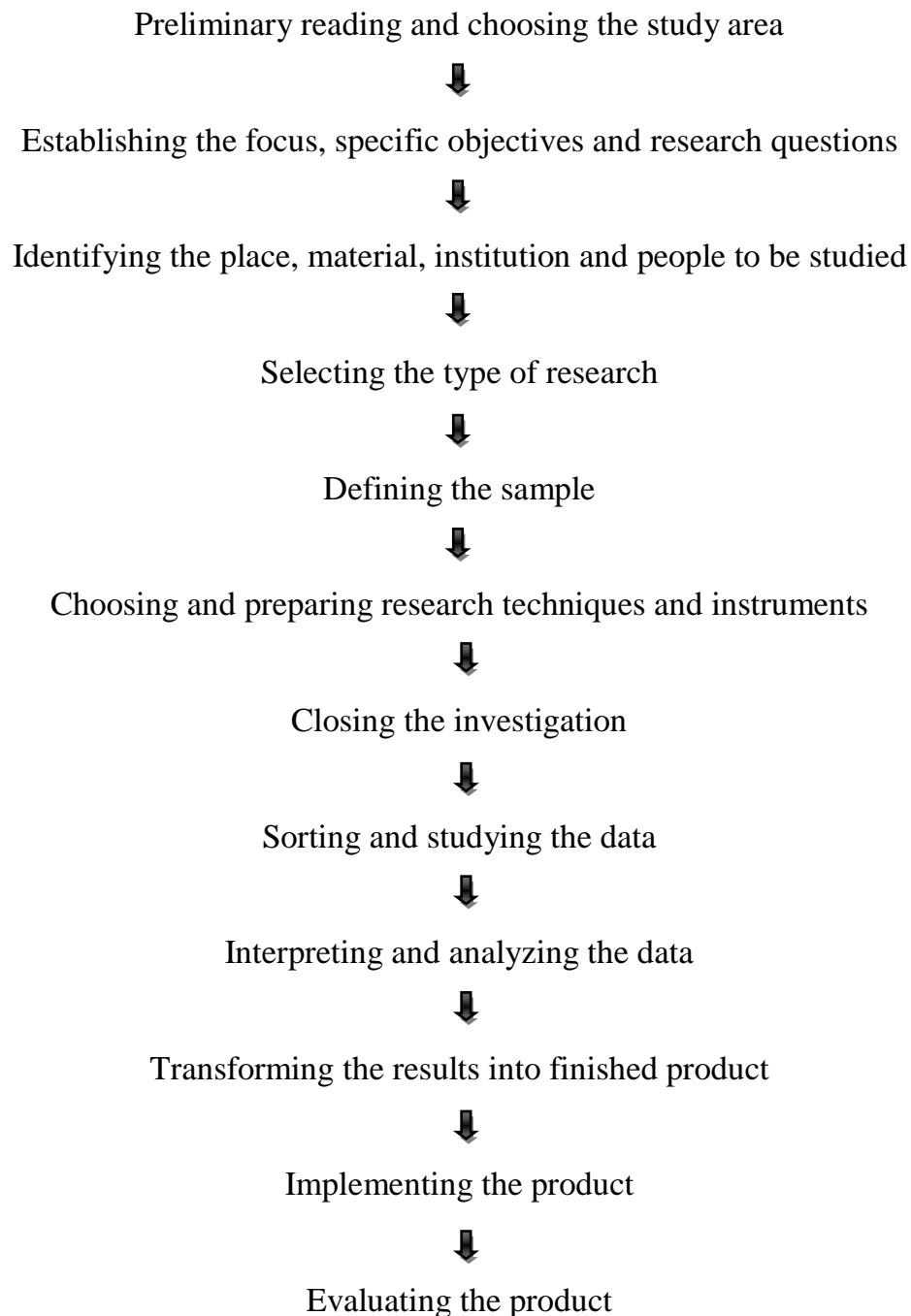


Figure 2.6 Typical Plan Adapted from Swetnam, 2004

2.4.1 Research Design

For the purpose of addressing the research problem adequately, the researcher will first define and select the research design that best suits the objectives of the study. According to Trochim (2006) the research design specifies the strategy

selected to integrate the different components of the study in a logical sequence. It is an overall plan that the researcher follows to attain the study's goals, since it is selected on the basis of, "obtaining information required to address the research problem", (Gorard, 2013). As reported by Gorard, the usefulness of the research design is shown by effective presentation of the data and the means by which it is obtained; also, there should be clear description of the methods of analysis that would best confirm or invalidate the research hypotheses. The research design is not merely a plan, it has another function which is, "to ensure that the evidence obtained enables us to answer the initial question as unambiguously as possible" (De Vaus, 2001).

Research designs can vary considerably according to the research question and study objectives. In fact, each type synchronizes with the research question of the phenomenon under investigation. The researcher plans the structure of the paper according to the research type used. These are classified from a range of perspectives; for instance, according to De Vaus (2001), research designs fall into four main categories: case study, experiment, longitudinal design and cross-sectional design. However, Blichfeldt and Anderson (2006) consider three research types or methods in social sciences contexts: grounded theory, clinical inquiry, case studies, and action research. It should be also noted that each type follows a logical organization of inquiry, and is guided by methods of collecting and analyzing data. For this reason it would be premature to start dealing with any research instrument without reporting on the selected type of design.

Depending on the research questions and to test the hypotheses accurately, the researcher has selected two types of design to carry out the study successfully: case study and action research. As far as this research work is concerned, the aim behind the use of a mixed-methods or two different research designs approach, is to provide the required data that will address the different parts of the research questions, since a combination of methods, integrating two forms of data, provides a more complete understanding of the research problem (Creswell, 2003). Through

a mixed-method study, the researcher starts first with the case study, with data from the needs analysis (NA), then conducts action research to use this data as a basis for the follow-up research method, that is, by implementing the suggested course.

2.4.1.1 Case Study

The researcher has selected a case study to be undertaken first in the Pharmacy Department at the Faculty of Medicine, University of Saad Dahlab– Blida 1; second, among pharmacists in different workplaces. The instrumentation used will be described in detail throughout this section and the methods of analysis will be justified. As a research method it is conducted to obtain deeper understanding of the English language teaching and learning situation of Pharmacy students. Also, it aims at revealing the students' language needs in the academic and professional setting, to help the researcher design a suitable language course for the target level. Afterwards, this course will be implemented through the action research phase.

Case study design is adopted by researchers to carry out in-depth studies and proceed from general instances to conclusions. Creswell (2003) clarifies that through case studies, “the researcher explores in depth a program, an event, an activity, a process or one or more individuals”, for the purpose of understanding a specific situation or phenomenon. This definition is further reinforced by Gillham (2000), who elucidates the aim of the research design, to investigate a multiplicity of evidences from the case setting to attain the objectives of the study and answer the research questions. In fact, the role of the case study consists of narrowing down a very broad field of research into one or a few easily researchable examples.

As a research design type, a case study is conducted in different ways according to the purpose of the study. Mariano (1993 quoted in Zuker, 2009) indicates that it may be exploratory, descriptive, interpretive and explanatory. To illustrate, a research study could be undertaken to explore the situation with qualitative data, then utilize the finding in a second phase to gather quantitative information (Creswell, 2014). Likewise in the explanatory approach to research the

second stage is built upon the first one. However, in a descriptive model, the data or the study responses are described through means (research instruments) and par rapport to the variables (ibid). Taking an interpretive dimension, the case study reveals the perceptions and concerns of participants in a specific context (Thomas, 2010).

Accordingly, the present research is a descriptive and an explanatory case study. Firstly, it describes the learning situation of the English language among Pharmacy students and shapes the nature of the teaching and learning processes. Secondly, it attempts to explain the causal relationships between learning difficulties and the factors that might be responsible for these situations, and also to find the appropriate language tasks that would have a positive effect on students' language proficiency since the concern of explanatory research revolves around, “developing causal explanations and correlations”, (De Vaus, 2001). This is to argue that, for instance, students' absence in the English lesson may be affected by the teaching methodology used or to the fact that the class is timetabled at the end of the day. These predictions may not necessarily be true but the most important aspect about explanatory research is to remove ambiguity, that is, by trying to find a logical link between the problem and the main cause because the main interest of research design in explanatory research is to observe correlation and avoid invalid inferences (ibid).

Despite its utility in the research field, this type of design can have side effects on study research. The major drawback of a case study is that it is not necessarily representative of a wider sample (Tellis, 1997). This type of design has been subject to criticism, claiming that “it lacks statistical generalizability” (Thomas, 2010: 311) although Yin (2003) provided a counter argument relating to analytical generalizations. Also, the researcher may be inclined towards subjective evaluation of data, neglecting some possible interpretations. There is another aspect to point out, which is revealed through the nature of a case study that only enquires about and describes a phenomenon without following up with intervention (Zucker,

2009), that is to say, offering the findings without application. Finally, it is worth reminding that no research method is perfect, and that the purpose of selecting any research design lies upon the objectives of the study in question.

Regardless of its limitations, case study has been proven to be valuable in research. In the present investigation it seeks out the learners' perceptions of and attitudes to learning the English Language, as it examines their target needs and learning needs. Additionally, this strategy of inquiry unveils the language components and skills that students of Pharmacy and pharmacists need most in the academic and professional setting. In the same vein, the scope of the case study explains how these skills and language abilities could be strengthened and promoted to reach a communicative purpose since this type of research design emphasizes and promotes the role of communication (Scott, 2005). Coming to this phase, the researcher sought other research methods that would help make better use of the case study's participants' (students, subject specialists and pharmacists) reactions - simultaneously, assessing the feasibility of a suggested course. An action research study is conducted, therefore, in order to gauge whether it has a positive impact or not.

2.4.1.2 Action Research

Action research, as an enquiry path in the educational setting, allows the researcher to intervene to improve the teaching practice, along with boosting student learning outcomes. To define the concept of action research, Mills (2000: 5) reports that it is, "an inquiry done by teachers (or other individuals in an educational setting) to gather information about, and subsequently improve, the ways their particular educational setting operates, how they teach, and how well their students learn". Similarly, Richards and Farrell (2005: 171) summarize this research type as follows:

... research refers to the systematic approach to carrying out investigations and collecting information that is designed to illuminate an issue or problem and to

improve classroom practice and the word 'action' on the other hand refers to taking practical action to resolve classroom problems .

In general, action research enables researchers to reflect upon and ameliorate the educative process, as it gives them an opportunity to study the learning situation, providing them with new knowledge about how to solve significant problems in the classroom (ibid, 2011). Johnson (2012, quoted in Hine, 2013) also adds that this research model bridges the gap between research and practice. It is important to note that, in contrast to traditional research, the reason for undertaking this study is not solely to aim at reporting results that could be generalized, but also to take action in a specific learning environment and to bring about positive changes.

Action research has many characteristics that differentiate it from other types of research design. Firstly, it is related to a certain context to be improved on, where the teacher researcher or researcher implements strategies to ameliorate a learning situation, including the learners' own skills and strategies. As reported by Yin (2011), it is particularised by its ability to reconsider taken-for-granted ways of teaching. One of its peculiarities, also, is to offer the researcher an opportunity to be exposed to the context, where there is a close contact with students, so as to examine their performance in the classroom, identify their needs and decide on what and how best to teach them. However, many researchers/teachers are reluctant to do it because they think it requires too much time and might result in undesirable changes (Dehnad & Nasser, 2014). Despite this fact, there are some teacher researchers who have adopted action research and, as asserted by Russo (2013), recorded significant improvements regarding their students' language performance. Although this research tool has not often been exploited by researchers, it is characterized by its unquestionable value regarding its, "collection of trustworthy data on the multiple perspectives of particular individuals" (Sierocka, 2016: 228).

In framing this research design the researcher has opted for an action research model for many reasons. First, this research type has been exploited in an EFL context, but scarcely investigated in ESP. Dehnad and Nasser (2014) have used the action research in a study conducted with medical students, concerning their motivation in the language class. It has also been conducted with a large, mixed ability group of nursing students. However, the literature did not provide any similar studies within a pharmaceutical context. Second, it aims at examining the different features of instruction and learning for the purpose of enhancing students' performance in the target language, as it seeks out aspects in teaching as a means for increasing knowledge and improving practice, (Eikeland, 2012). Thirdly, it is based on reflective practice, as the researcher plays the role of the teacher and follows, "a self-reflective, critical and systematic approach to explore the context" (Burns, 2009: 289), and generates ideas that would help her design the syllabus, implement it and make an overall evaluation of the teaching content and procedure, as well as the learning outcomes. Taking action in research is part of the practitioner's roles in ESP course stages. Therefore, due to the complexity of an ESP course, there are multiple roles and tasks that the ESP practitioner should cover, which require a considered selection of the appropriate model of action research.

With regards to action research models, scholars have provided various and different frameworks to work within any social or educational environment. This research type was first formulated by Kurt Lewin in the 1940s, who suggested the first action plan in social studies, as shown in figure 2.7, which, unlike experimental research, that is oriented towards problem solving, aims at improving and modifying the current practices. The models do share common aspects, particularly the cyclical process, as it involves, "posing questions, gathering data, reflection and deciding on course action" (Ferrance, 2000). The researcher starts out with a problem, designs a potential solution and then acts upon it. Subsequently, the researcher may edit the primary solution and prompt the action plan again. This can

be illustrated through Stringer's (1999) action research process, 'Look, Think, Act', or by Kemis' earlier model (1983), which shares the same perspective as one by Lewin which is simpler, with four steps: plan, act, observe and reflect.

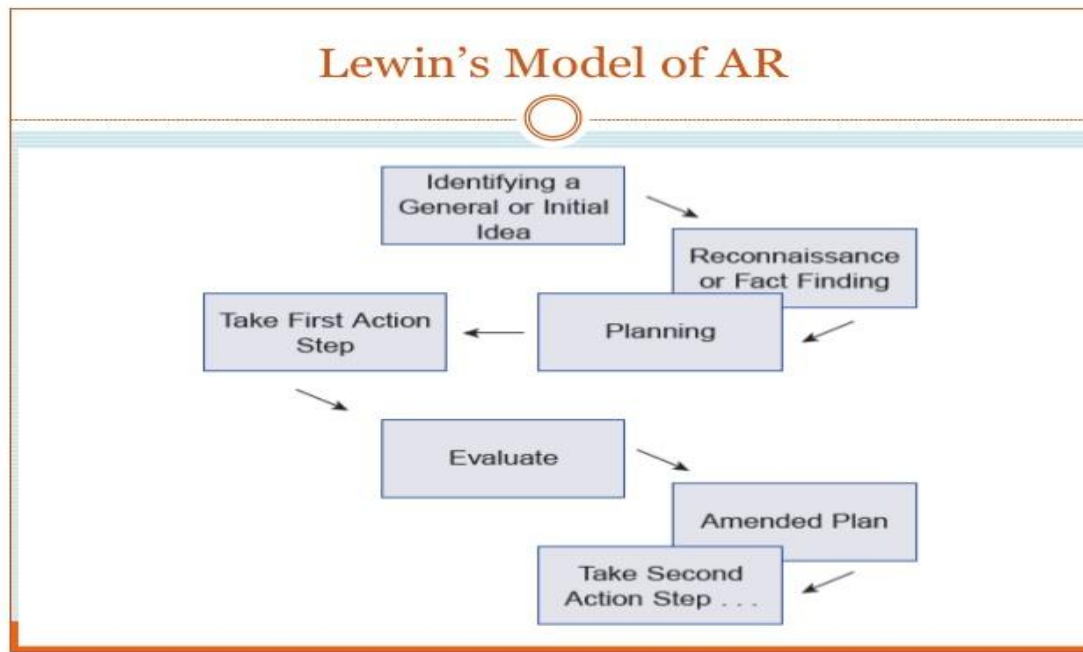


Figure 2.7 Action Research Model (Lewin, 1951:206)

Approximately in the same vein, Susman (1983) has provided an elaborated action research mode which involves and indicates the evaluation phase explicitly. The model is displayed in the following figure:

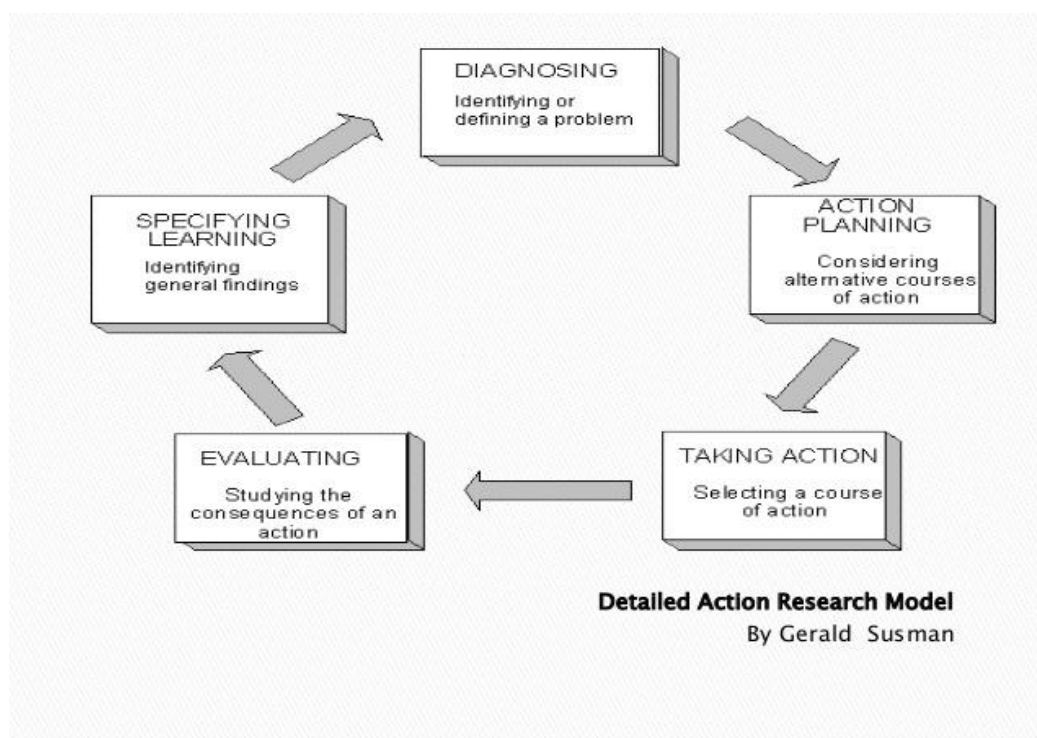


Figure 2.8 Susman’s Action Research Model (1983)

Experts in the field of ELT are constantly adopting new teaching paradigms to find practical solutions for classroom problems. Their concern is to design an action research model that will bring about innovations in the educational environment. Davidoff and Van Den Berg (1990) suggest a four step action plan: plan, teach / act, observe and reflect, later adapted by British Council (2015) in a five stage model, as shown in figure 2.9. This model was also adapted by the researcher in the present study, as it can be a catalyst for improving students’ level in English (Smith, 2015).

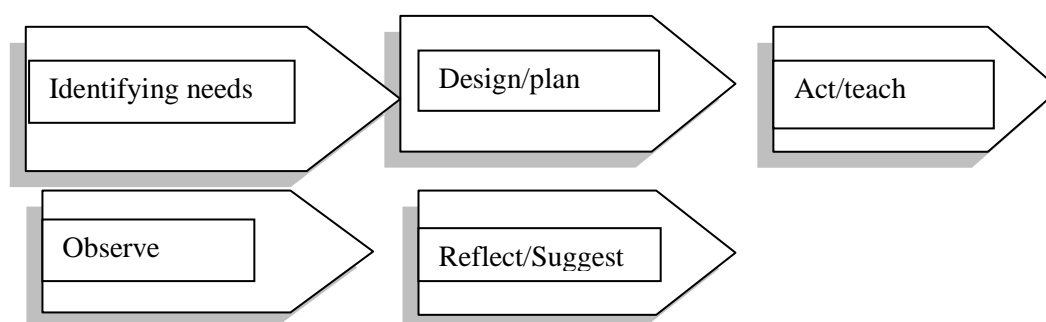


Figure 2.9 Stages of Action Research (adapted from British Council, 2015)

CHAPTER TWO SITUATION ANALYSIS AND RESEARCH METHODOLOGY

The above model has been adapted to suit the objectives of the study. The steps are presented as follows:

- Identifying needs

The starting point of ESP teaching is to identify the students' language needs and problems encountered in the classroom. This step will be accomplished in Chapter 3 where the researcher undertakes a case study - including interviews, questionnaires and classroom observation to unveil Pharmacy students' needs.

- Design/ plan

This phase involves the syllabus content to be taught where the researcher chooses the type of activities to suit students' needs and interests (chapter 4). Planning also involves the methodology followed in the implementation of the syllabus, including context, participants and teaching method, which is included in the first part of chapter 5 data.

- Act/teach

This stage aims at putting the plan into action, which is the concern of chapter 5. It consists of teaching the syllabus content along with trying out new teaching techniques.

- Observe

This step consists of gathering evidence on students' achievement and classroom climate during the intervention cycle.

- Reflect /suggest

The final stage comprises the results obtained from the instruments used in the intervention. It also involves recommendations and suggestions for teaching English to medical students.

2.4.2 Sampling

When conducting research it is important to shed light on its components and mention their role and efficacy in relation to the research objectives. After selecting the type of research design, the researcher first needs to determine the population that will constitute the sample of the study that represents the target audience⁴. The sample is a necessary element for conducting any research. Samples work together in an attempt to address the research questions. Therefore, the researcher will first define the sample population, determine the size and justifies the type of sampling.

The informants who were selected by the researcher consisted of students and teachers of Pharmacy, the English language teacher and pharmacists in the work place. The variation of the sample is based upon the belief that each participant adds to a, more in-depth, critically informed response-base, with a clearer perception of learning needs and teaching-learning issues (Creswell, 2011). With regards to the sample size, the purpose is to obtain, “a manageable part of population that supposedly possesses the same qualities as the whole” (Swetnam 2004:42), and the sample should be large enough to represent the entire population. However, the researcher may be compelled by circumstances to include in the study only subjects who can be reached. As far as Pharmacy students are concerned, they do not come to the English class frequently and are not available all the time. For this reason, the researcher opted for random sampling and chose 40 students among 250. The sample containing teachers and pharmacy professionals was selected for the reason that they are more likely to be aware of the importance of the English language than the students. The reason behind choosing different samples is to allow for the maximizing of the similarities and the differences of information to be gathered.

⁴ This represents the people whom the researcher is trying to measure their needs.

2.4.2.1 Students' Profile

The informants selected for the study represent a subset of the target population, that is, the researcher selected, through random sampling, a number of 40 first year, 36 second year and 10 post graduate students in the Department of Pharmacy at the University of Blida to enable inferences about the entire population to be made. With randomization, the sample is more likely to be generalized to the whole population as, “each and every item in the population has an equal chance of inclusion in the sample” (Creswell, 2014), not only because of the convenience and availability in which that random sampling was selected, but also, through this procedure, bias can be eliminated. Moreover, it should also be pointed out that when the target population is estimated to be large (250), it is advisable to resort to random sampling that can, “yield a sample of participants who are sufficiently representative of the population which is a key for making generalization” (Allen, 2017: 615).

All of the students involved in this study attended English classes for 6 years in secondary education. The reason behind selecting first and second year students is due to the fact that both levels study English in the second semester and that second year students have already had an experience of one semester English in their first year. Also, 10 postgraduate students, enrolled in first and second year Microbiology, Genetics and Biochemistry, have been selected to provide the researcher with pertinent information with regards to the importance of the English language in postgraduate studies. They are also more aware of its necessity in the Pharmacy program as they have already graduated. All the students responded to the questionnaires; however, only undergraduate students participated in the action research, since English classes are assigned only to first and second year students.

2.4.2.2 Subject Specialists' Profile

Besides students, 10 subject specialists who are teachers in charge of different modules within the department of Pharmacy were randomly chosen to participate in

this research study. The informants hold a doctorate degree in Medical Studies and seven of them had already passed the DEMS⁵ exam and obtained the degree. Among the participants, there are four professors who, aside from teaching at the department of Pharmacy, are head of Microbiology, Biochemistry and Haematology sections in two different hospitals in Blida. They have different teaching experiences that vary from 6 to 26 years. Two teachers are in charge of Analytical Chemistry, whereas the rest teach the following modules: Biochemistry, Physiology, Organic Chemistry, Genetics, Mineral Chemistry, Galenic Pharmacy, Microbiology and Botantics.

The researcher drew a sample population that was stratified according to the modules taught so as to consider the importance and the necessity of the English language in relation to different content subjects. Collaboration with content specialists is essential to know more about the role of the English Language in the domain of Pharmacy and to acquire basic subject knowledge, especially when the researcher is undertaking an action research. Regarding content knowledge, Chen (2000:389) considers that it is an element of an ESP teacher qualification as this can help practitioners to, “conceptualize appropriate notions for teaching approaches”. For this reason, the researcher decided to cooperate with subject specialists and obtain a representative sample where each individual considers the language from the perspective of the module s/he teaches.

2.4.2.3 Language Teacher’ Profile

There is only one teacher of English in the department of Pharmacy with whom the researcher conducted an interview. Our respondent, who holds a License degree in English Language Studies, has been a part time teacher in the Faculty of Medicine for eight years. He delivers English courses to dental surgery and pharmacy students. In regards to his teaching procedure, the teacher relies on

⁵ Degree of specialized medical studies.

Wikipedia articles to prepare the lecture since the department does not provide any syllabus for language courses.

2.4.2.4 Pharmacists' Profile

Similarly with subject specialists, the researcher selected 20 pharmacists through stratified random sampling in an attempt to make the sample representative. The sample consists of eight medical sales representatives who work in the following multinational pharmaceutical companies in Algeria: SANOFI, BOUCHARA RECORDATI, GSK and MSD, where the employees may be confronted with a situation (writing reports, attending conferences, communicating with foreign workers) in which English is needed. Within the same category, that is industrial Pharmacy (as previously explained in this chapter), the researcher chose four technician pharmacists and four product managers working in the marketing department of the same companies. They were selected to see to what extent the English language is needed in the Algerian industrial pharmaceutical context. Also, four clinical pharmacists from two different hospitals in Blida were selected. Unlike community pharmacists who already do so, clinical pharmacists need to raise doctors' awareness about the latest pharmaceutical innovations and provide the best healthcare services within the hospital through communicating with counterparts from the developed countries. For this reason, they were chosen to consider the utility and role of English in the clinical sector.

2.4.3 Data Collection Instruments

As a mixed-research study (see 2.4.1), the NIA was firstly conducted to unveil Pharmacy students' needs so as to design an English course accordingly. For this purpose, three research instruments have been used since the multiplicity of data sources establishes the following criteria for the research data: objectivity, reliability and validity (Richards, 2001). Questionnaires were submitted to undergraduate (first year and second year), post graduate Pharmacy students, and pharmacists at their workplace. Also, the researcher conducted a semi-structured

interview with the English teacher and subject specialists. Classroom observation was the third instrument to be adopted. The second step in this study is action research which was carried out among second year Pharmacy students, with whom the researcher used field notes, achievement test and focus group discussion with the participants.

2.4.3.1 Questionnaire

A questionnaire is a method of data collection that is concerned with providing answers to pre-established questions, for the purpose of elucidating on or interpreting any ambiguity. It is believed that questionnaires are one of the most common instruments used in research. They are used to gather data that can easily be evaluated from the written opinions of participants or tabulated in numbers. The current questionnaire was addressed to first and second year and mailed to post graduate Pharmacy students at Saad Dahlab University to stimulate the production of qualitative and quantitative data. The questionnaire helps the researcher answer the research questions and check the validity of the formulated hypotheses.

The questionnaire has many aspects that the researcher should take into account before its design. According to Kothari (2004), this fact requires the study of the general form, question sequence, question formulation and wording. The questionnaire can either be unstructured or structured (*ibid*). Unlike the former, the latter is constituted from clear and definite questions in form of closed (like ‘yes or no’ or ‘Likert’ responses), open (free responses), open-ended or multiple choice questions. With regards to question sequence, they should be properly ordered and logically linked with a smooth connectedness, so as to reach the desired engagement and collaboration with the respondents. Thirdly, question formulation should not be biased to elicit a particular desired response from the participants; that is, questions have to be simply developed and easily understood. Despite the risk of a low return of filled questionnaires and ambiguous responses, the questionnaire remains a useful tool to gather information for needs assessment with a degree of anonymity

that allows “the person questioned more freedom of expression” (Richterich and Chancerel, 1980: 59, in Bouklikha, 2016).

With regards to the questionnaires completed by undergraduate and post-graduate students and Pharmacists at work, they involve a variety of questions and are divided into different parts to properly address the research questions. Closed and scale questions have been used to obtain complete and quantitative data that are easier to analyse (Johnson, 1992 in Bouklikha, 2016). Also, open –ended questions are designed to obtain the participants’ perceptions, which helps the researcher “to listen carefully to what people say” about a certain topic (Creswell, 2014: 40). Since the participants are considered under a case study method, the questionnaires are intended to compare and contrast the results and study the interrelationships using the same data collection tool.

2.4.3.1.1 Piloting the Study

A preliminary questionnaire was addressed to 3 first and 4 second year students before the study proper. This process is referred to as a pilot study “to try out or pre-test the research instrument” (Baker, 1994:82-3) for the purpose of revealing weaknesses and seeking improvements. It allowed the researcher to remove ambiguity from certain questions related to the teaching method and learning needs, in order to reword them clearly to obtain the final version.

The administration of the questionnaire was performed by the researcher herself in the Department of Pharmacy at Blida 1 University as well as through online web tools. The questionnaires were distributed to 76 undergraduate (first and second year) students who collaborated with the researcher and provided their answers. Since the questionnaire was designed solely in English, the researcher was present to respond to the participants’ queries concerning any question or difficult term. They were given the opportunity to reply in English, French or Arabic to express themselves more freely. Post-graduate students couldn’t be reached since they are not always available in their laboratories. Therefore, the questionnaires were sent by email in two versions (French and English) to 13 subjects, from whom

there were 10 respondents. Likewise, questionnaires were addressed to the 20 pharmacists via email and they were after many reminders.

2.4.3.1.2 Undergraduate Students' Questionnaire

The questionnaire taken by undergraduate students attempted to determine their attitudes towards the English language and perceptions of the teaching as well as to identify their English language needs. The questionnaire was submitted to 40 first year students and 36 second year students, and collected and analyzed separately, since both levels have different English learning experience (as stated previously) which may affect the results. It is constituted of two parts according to the questions' objectives. Firstly, it deals with the profile information to better understand the English experience (proficiency level) of the participants and analyse data accordingly. Also, it tackles students' self-evaluation of their English proficiency level. It contains four closed and multiple choice questions. The second part is concerned with needs analysis and identification following Hutchinson and Waters' theory (1987). The latter constitutes the core of the questionnaire, that is, it is designed mainly to contribute to answering the first and second research questions about students' English language needs and requirements to master the language for a communicative purpose. The aforementioned theory of needs analysis embodies three notions upon which the second part of the questionnaire was built: necessities, lacks and wants. As a consequence, the questionnaire is divided into four rubrics. (see Appendix A)

The first rubric, question 01 to 04, deals with the informants' profile so as to reveal their English background knowledge.

The second rubric, question 05 to 10, reflects what is considered as fundamental for Pharmacy students; namely, the necessities. It deals with students' attitudes towards the importance of the language in reference to their studies field as it tackles the activities and language skills and components regarded as necessary to reach a communicative purpose. The objectives of the questions revolve around the

degree of importance of the English language in relation to pharmacy studies as they examine the students' attitudes towards the content of the English course. Also, they enquire about the language skills and instructional tasks that students consider necessary to their academic life.

As far as the third rubric in the questionnaire is concerned (from question 11 to 18), it deals with the informants' lacks in the English language. The researcher designed eight questions to identify these lacks in order to be able to bridge the gap between what students already know and the target linguistic features. The objectives involve the inquiry about the students' current level and the difficulties encountered in vocabulary comprehension and communication.

After examining the necessities and lacks, the third notion to be dealt with, is the students' wants in the academic context. In this rubric, from question 19 to 22, the researcher seeks to unveil students' preferences and expectations in regards to instructional activities, language components and teaching content. The last question in this rubric aims at analysing students' perceptions of the current English language course and exploring suggestions in regards to the teaching procedure and content.

2.4.3.1.3 Postgraduate Students' Questionnaire

Using the same research instrument with undergraduate and postgraduate students is a means to cross-check the reliability of information provided from different levels for the purpose of answering the first and second research questions that concern Pharmacy students' needs and the fulfilment of these needs to reach a communicative purpose. The questionnaire aims at revealing the importance of English and the language skills that are mostly required in the academic context of Pharmacy, in addition to pointing out language practices that would enhance students' communication. It follows almost the same structure as that of the first and second year students' (as mentioned in appendix B), but it differs in tackling the importance of the language from the perspective of each specialty. Also,

questions about the current course content, participation and attendance were not addressed.

2.4.3.1.4 Pharmacists' Questionnaire

As with the Pharmacy students, the questionnaire was also taken by pharmacists since it is thought to be the least consuming and practical way of collecting information - especially useful when the sample population consists of 20 pharmacists who occupy different jobs and it is difficult to reach them. This questionnaire aims at revealing the importance of English mainly in the professional setting, as it also attempts to find out the language skills that should be developed by Pharmacy students to serve work communicative situations. It involves eight questions as it is believed that lengthy questionnaires for the full-time workers may not retain their interest and consequently data would not be complete (see appendix C). Therefore, the researcher inquired about the informants' profile and language necessities, designing the following questions, as defined by their objectives as stated below:

Questions 01 to 03 aim at revealing the applicants' profession and English language background.

Questions 04 to 08: are intended to highlight the importance of communication in English in the academic and professional field and explore language competencies students need to develop most. Also, these questions looked into the impact of medical terminology on pharmacy studies and pharmacists' field of work.

After reporting the questionnaire as a research instrument and giving a detailed account on the data collection, the researcher adopted the interview technique, since it is believed to be good for obtaining detailed information (Genise, 2002; Shneiderman and Plaisant, 2005).

2.4.3.2 Interview

Apart from measurement oriented data collection methods, like questionnaires, personal interviews are built upon the subjective relationship between the researcher and the respondent, explaining meaning that lies behind certain social or educational phenomena. Interviewing is a data collection technique that helps the researcher elicit the desired information from individuals and gather text information rather than numeric information (Creswell, 2003). Using this technique, the researcher seeks answers to pre-established questions while maintaining the course of the interview in accordance with the objective of the study. Needs assessment also relies on interviews (McCawley, 2009) where, in contrast to questionnaires, it is permissible to probe to gain further insight.

Interviews are divided into three types: structured, semi-structured and unstructured. The first type is characterized by setting fixed questions that the researcher addresses to, “all interviewees with the same wording and in the same sequence” (Corbetta, 2003: 269), which will make it easier to analyze and code data. However, probing cannot take place as it follows a specific interview guide and answers should be precise and concise. Nevertheless, the unstructured type of interview is much more flexible where the interviewer may add, omit or change the sequence of questions; nevertheless, as asserted by Sharp et al. (2002), this results in unstructured responses that may differ greatly from one interviewee to another and the fact that makes it difficult and time-consuming when analysing data. Pointing to the third interview genre, it has the features of both structured and unstructured interviews.

The researcher adopted pre-planned core questions together with open questions, to give the respondents the opportunity to elaborate a given response or add relevant information. Therefore, a semi-structured interviewing was the type of inquiry conducted, allowing the interviewer to “spend considerable time probing participant responses, encouraging them to provide detail and clarification” (Harris

& Brown, 2010: 01). Through use of semi-structured interviews the researcher can raise other issues and questions that were not taken into account previously. Moreover, it was designed following Hutchinson and Waters model of needs assessment to highlight, from interpreting subject specialists' responses, students' needs in the pharmaceutical domain and their learning needs in the academic context.

2.4.3.2.1 Interview with Subject Specialists

A panel of 10 subject specialists was selected for the interview, to gain a deeper insight into the students' learning needs and necessities in the pharmaceutical domain. It seeks to highlight the importance of English and determine the skills and language items that Pharmacy students need to master most, besides it aims at underlining the suitable teaching techniques and different tasks that help students reach communication in English. It was conducted 5 to 6 weeks after the questionnaires were filled out. Moreover, conducting a face-to-face interview in the interviewee's habitual environment (office or laboratory) created a relaxed atmosphere in which the individual was allowed to talk openly. In addition, the researcher obtained the respondents' consent to record their conversations. The core interview schedule consisted of open-ended and scale questions that revolve around the following main points (see appendix D):

- Teachers' profile and background knowledge in English (Question 01 to 05)
- The importance of the English and the language skills that need to be developed (Question 06 to 08)
- Suitable learning techniques and tasks to help students reach communication in English. (Question 09).

2.4.3.2.2 English Teacher Interview

Following the same model of NIA, the interview was conducted with the English teacher to elicit the students' lacks and wants as s/he is more knowledgeable about their language deficiencies, and can determine their preferences as well. It contains eight questions (see appendix E). This research tool is also meant to provide in-depth data about the current teaching procedure and content as it is indicated through the following questions:

- Question 01 aims at revealing the students' lacks.
- Question 02 seeks to unveil the students' preferences (wants).
- Questions 03 to 08 intend to highlight the teaching procedure and content.

The questions objectives are as follows:

- Question 03 intends to determine the teacher's objectives.
- Questions 04 to 06 aim at exploring the English language syllabus designed for medical students, and the instructional materials used and the teaching method followed by the teacher.
- Questions 07 to 08 intend to shed light on medical terminology and the role of Latin and Greek in its teaching.

2.4.3.3 Classroom Observation

Like interviews, observations aim at gathering "deep" information and perceptions (Creswell, 1998). Through conducting a classroom observation the focus is on the teaching procedure and students' behaviour in class. It sheds light on "how the teacher creates a positive atmosphere for learning and how well the teacher carries out different aspects of the lesson" (Richards and Farrell, 2011). The researcher carried out observational techniques for observing the learners' behaviour and their engagement in the learning context, including their language

use and linguistic inadequacies. Moreover, this research tool aims at obtaining information about the teaching content and how it is delivered (see Appendix F). The following items are included within the observation grid:

- Educational climate for learning: this refers to the characteristics of the classroom setting. It aims at highlighting the factors which have an impact on student learning and achievement, that is, whether the teacher provides a safe and relaxed atmosphere that allows a smooth learning process.
- Lesson structure and content: it refers to the teaching steps and the language components the teacher plans for the English class. It aims at analysing the teaching content and how it is presented to the learners.
- Teaching materials and activities: this item, as it indicates, introduces the teaching support and the activities adopted by the teacher. Through this item the researcher intends to explore the material and language activities designed for pharmacy students.
- Teacher's and students' use of language: this element describes the language through which teacher and students communicate in the classroom. The purpose is to explore the language used, first, by the students to express themselves in written and oral form, and, second, by the teacher to deliver the information.
- Students' interaction: in this part the researcher mentions student-student and teacher-student interaction. The aim is to discover to what extent students feel involved in the classroom and have the opportunity to be engaged in the learning process.

The researcher chose second year students as they have already completed the questionnaire and they will be selected to participate in action research. More than 4 observational sessions were conducted with second year students. The number of sessions was restricted by the teacher availability and students' attendance. As noticed by the researcher and the English teacher, at first, the participants felt uncomfortable due to the presence of the observer, but after two sessions they

started feeling at ease, which contributed to the authenticity of students' behavior in the learning environment.

2.4.4 Action Research Stages and Instruments

The Action Research (AR) took place in the second semester of the academic year 2017-2018, starting in mid-February, with second year students. It was carried out for the purpose of offering an English course to focus on specific types of language skills as it also proved to sustain the effect on teaching practice, student learning and syllabus development.

2.4.4.1 Stages

The intervention aims at revealing the effects of the multi-focus syllabus and new teaching strategies on Pharmacy students' performance and interaction in the classroom. The implementation of the multi-focus syllabus aims at reinforcing students' communicative abilities through fostering the skills and language components necessary for the target population. Following the above mentioned model (Figure 2.9), the action research goes through five phases, as described below:

Stage 1: the researcher sought to explore the utility and necessity of mastering the English language within a medical domain, working with students of Pharmacy, in particular. The first step is accomplished through a NIA that is conducted among students, the English teacher, subject specialists and pharmacists..

Stage 2: this step was intended to design the syllabus that will best meet pharmacy students' needs. It concerns the solution and how to implement it (Sue Davidoff and Owen Van Den Berg, 1990) with regards to the interfering elements, such as time, sample size, availability and accessibility. It involves, firstly, design of the syllabus with clarification of the teaching techniques followed in the classroom and, second, the instruments that help with the assessment of the teaching content and procedure.

Stage 3: it consists of putting the plan into action; or, simply put, implementing the solution (Negi, 2016). It was launched with second year students during the second semester of the academic year 2017-2018.

Stage 4: in this stage the effects of the action are observed. This phase consists of collecting data to analyse to what extent the teaching content and techniques were effective. According to Johnson (2012), action research does not solely rely upon writing and reporting data, but rather on making conclusions based on that data. In order to gauge the success of the implemented solution, evidence was gathered through three data collection techniques: teacher field notes (Johnson, 2012), focus group discussion and achievement test.

Stage 5: the final stage consists of analysing the data gathered to reflect upon the teaching practice. The information obtained from the research tools reveals the effects of teaching the multi-focus syllabus to Pharmacy students, opening up insights for the researcher to generate new ideas and offer recommendations concerning teaching English for Pharmaceutical purposes.

2.4.4.2 Action Research Instruments

To find out about the effectiveness of the syllabus content and teaching practice the researcher designed an achievement test after implementing the multi-focus syllabus. Besides, the focus group discussion took place twice during the AR procedure; initially, after the first four sessions then, secondly, at the end of the instruction period.

2.4.4.2.1 Teacher Field Notes

Field notes consist of teacher's written observations of what is taking place in the classroom. Johnson (2012) highlights that the teacher may write observations while teaching, what he calls 'thick descriptions' while there is another possibility to make 'quick notes' or jottings during teaching. Here, the teacher (observer) should record what she sees, in terms of behaviour and skills, and should provide a

sense of chronology so as to save time and keep pace with the classroom activity. The teacher researcher may also keep record of the observations after teaching (right after the lesson or by the end of the day) to be developed in detail later. Audio- or video-taping can accompany the observation task so as to reinforce the teacher's reflections.

2.4.4.2.2 Achievement Test

To measure students' knowledge after the course implementation, the researcher has opted for an achievement test as a type of summative assessment. First, summative assessment refers to the evaluation of student learning at the end of an instructional period by comparing it against specific standards - in contrast to formative assessment, where the goal of the assessor is to monitor student learning to provide feedback that can be used to improve teaching and learning. The researcher used the achievement test to measure how students have fared with regards to the content taught and, "to determine whether course objectives have been met" (Brown, 2004:48). In this course, it is implemented to gauge the effectiveness of the syllabus in enhancing students' reading and vocabulary skills, together with the ability to recognize and use grammar structures. The achievement test also involved an oral test aimed at evaluating to what extent the suggested teaching strategies, namely, narratives, communication tasks and role plays, contributed in improving students' oral communication.

The test was conducted at the end of the teaching period. It was based on authentic tasks that involve real-life language and field specific content that is similar to that of the target situation. Authenticity, together with reliability and validity, are important elements in testing. It is crucial to take these into account in an ESP setting as they are considered essential measurement parameters (Douglas, 2000).

The achievement test aims at measuring to what extent the students have assimilated the content of the syllabus and how far students' oral communication has improved through role plays and communication tasks.

2.4.4.2.3 Focus Group Discussion

As reported in the literature focus group discussion or focused interview "is meant to focus attention on the given experience of the respondent and its effects" (Kothari, 94: 2004). The major task of the interviewer was to elicit participants' view points and attitudes in regards to the implementation of the multi-focus syllabus. When meeting the participants for a focus group discussion, by the end of the instructional period, the researcher sharpened the focus of attention on students' attitudes towards the teaching practice (including strategies and tasks) and investigated their self- evaluation of language skills; stating explicitly what skills need to be reinforced. In addition, the researcher emphasized on the students' perceptions on the effectiveness of the suggested syllabus, including type of tasks, teaching strategies and text variation on improving communication skills. The results were cross-checked with the achievement test.

2.4.5 Data Analysis Procedure

The most common distinctions in the research modes are qualitative and quantitative methods. They refer to the way in which data are collected and analysed. In the present study, the researcher opted for a mixed methods approach to analysing data, "by taking advantage of the differences between quantitative and qualitative methods, and combine these two methods for use in a single research project" (Bryman and Burgess, 1999: 45). Considering this investigation, the researcher has used a case study design which does not necessitate using any specific method of data analysis, either quantitative or qualitative (Yin, 1993). This allows the adoption of data collection tools that would help analyse the data both qualitatively and quantitatively. Also, in action research both methods are employed.

2.4.5.1 Qualitative Analysis

Use of qualitative techniques for analysing data translates into gathering deep information and perceptions from the perspective of the research participants (Lester, 1999). They can be used to attempt to make sense of, or to interpret, phenomena through the meaning people bring to them (Denzin and Lincoln, 2003). Qualitative analysis is also used to consider the educational setting, including students' behaviour and the teacher's teaching procedure.

Qualitative approach to analysing data is mainly used in dealing with open-ended items in the questionnaire with students and pharmacists, and interviews with teachers. For instance, when dealing with questions that investigate students' participation in the classroom we may refer to "motivation factor" which represents a parameter of qualitative analysis. Qualitative data sources also include classroom observation where the quality of teaching content and learners' behaviour are measured.

2.4.5.2 Quantitative Analysis

This type of analysis is based on measuring data that can be quantified. Quantitative research reveals statistical results that can be tabulated in numbers, like the data obtained from questionnaires and the achievement test, as "it measures variables on a sample of subjects and expresses the relationship between variables using effect statistics such as correlations" (Thomas, 2010: 303). When dealing with closed-questions the researcher attempts to describe, and compare and quantify the respondents' answers collected from interviews and questionnaires, relating to the same issue. To illustrate, data obtained from the enquiry about the skills mostly needed by Pharmacy students was quantified to be further generalized from sample to population. However, using solely quantitative research could render the participants' insights and attitudes ambiguous. Therefore, a combination of data collection methods was selected in this research, to provide a full picture.

2.4.5.3 Triangulation

Whether to opt for qualitative or quantitative methods of data analysis has always been the main concern of research methodology. This has led the writers to ponder upon issues of biased research and establish mixed method strategies of enquiry (Creswell, 2003). Triangulation refers to the fact that one research method of data collection can be nested within another method to provide a comprehensive data analysis. Altrichter *et al* (2005) assume that it is very significant for any research question to rely on the triangulation method in the procedure of data collection. Through triangulation, the researcher captures a more holistic picture of the data obtained so as to validate the results derived from the research tools used in this study. Moreover, using a “within-method” strategy, that involves cross-checking the findings from different sources, reinforces reliability (Jick, 1979).

2.5 Conclusion

The present chapter describes the ESP teaching/ learning and workplace situations in the pharmaceutical context and gives a full account of the research methodology used. It is divided into two sections. As far as the first section is concerned, it sheds light on the current situation of the English language teaching in the department of Pharmacy from the Faculty of Medicine at the University of Saad Dahlab (Blida 1), by gathering data from students, the English language teacher and subject specialists. It also investigates the utility and necessity of the English language among professionals.

The second part in this chapter describes the research methodology, including the selected research designs. It deals, first, with the case study where needs analysis is conducted, then, it gives details on how the results are translated into practice, that is, via action research. The sampling techniques and the selection of instruments used to collect data are fully described and justified. It also gives a detailed account of the methods followed to analyse the information gathered.

CHAPTER THREE
NEEDS IDENTIFICATION AND ANALYSIS

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3.1 Introduction

In the current research, the main interest lies in designing a syllabus for Pharmacy students that would best respond to the needs of their field. For this reason, a needs identification and analysis is conducted to collect the data required. In this chapter a case study is carried out to analyze the data obtained from the research tools previously described. The purpose is to consult students' and teachers' perceptions and attitudes towards English language learning and the language itself, as it also investigates the status and importance of English with regard to pharmacists in the work place. Moreover, the researcher attempts to identify the students' problems in terms of language acquisition and teaching method and find out their needs in the target situation.

3.2 Students' Questionnaire

The questionnaire was designed for Pharmacy undergraduate and postgraduate students to serve the study's objectives, as it also helps the researchers to gather reliable and valid data in a short time (Anderson, 1990). The researcher aimed to determine the students' perceptions and attitudes towards learning the English language and to identify their learning and target needs in the educational environment.

The questionnaire for undergraduate students is composed of 22 questions, whereas post-graduates' contains 16. It is divided into four rubrics: the informants' profile, where the respondents provide data about their level of studies and English language proficiency. Second, the necessities, where the researcher expects to know the language skills and components that, "seem necessary for the students to be included in their English course" (Bouklikha, 2016:158). Thirdly, the lacks, which Benyelles (2009) defines as the gap between the students' present background and the target background. The final rubric represents the wants, which constitute what students would like to improve most and their suggestions concerning the English course. Questionnaires for both levels were analyzed separately since second year

students had already had approximately a two years' experience at university, so their answers may be expected to be different.

3.2.1 First Year Students

The questionnaire was delivered to 40 first year Pharmacy students in the faculty of Medicine at Blida 1 University at the end of the second semester of the academic year 2016-2017.

3.2.1.1 Results

Question 01 and 02: Students' Profile

These questions are related to the students' gender and level. All the students (40) are enrolled in first year Pharmacy. Among 40 participants of first year, 33 are females. Their age varies between 18 to 20 years old.

Question 03: Students' Self Evaluation

The third element of the first section portrays a self-evaluation by the students. It is noticed that 40% of the participants have an average level in English, while it has been reported that 20% of students evaluate their level as above average. The level of the rest of the informants varies between below average and low (17.5% -12.5%). Only 4 subjects reported their level of performance as advanced. The figure below illustrates how students evaluate their proficiency level in English.

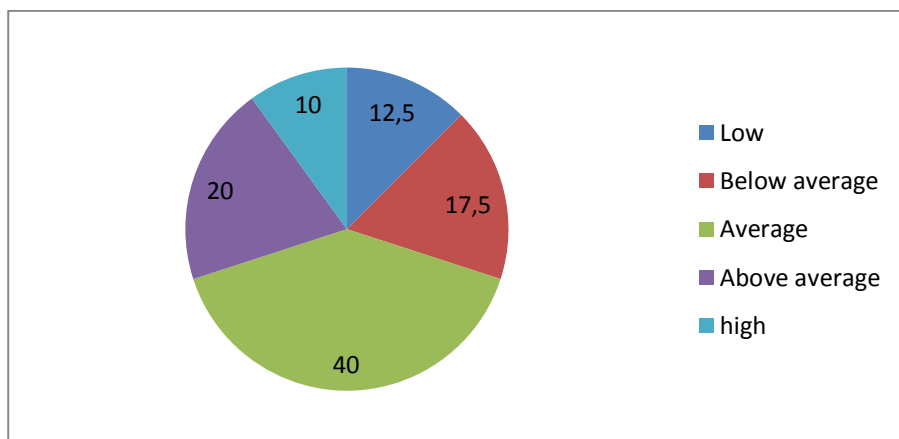


Figure 3.1 Students' self-evaluation of the English proficiency level

Question 04: Students' English Experience

The fourth question reveals the situations under which the informants have been studying English. All of the informants took English courses in formal education; however only 9 informants attended private schools to learn English.

Question 05: The Importance of English in relation to Pharmacy Studies

It appears that 50% of the informants find it very important and 20% mentioned that it is moderately important to learn English Pharmacy Studies. While 5% of the respondents accord very high importance to the language, the rest believe it is slightly (20%) or not all important (5%) to acquire the English language to use it in their studies. The informants' responses are represented through the following chart.

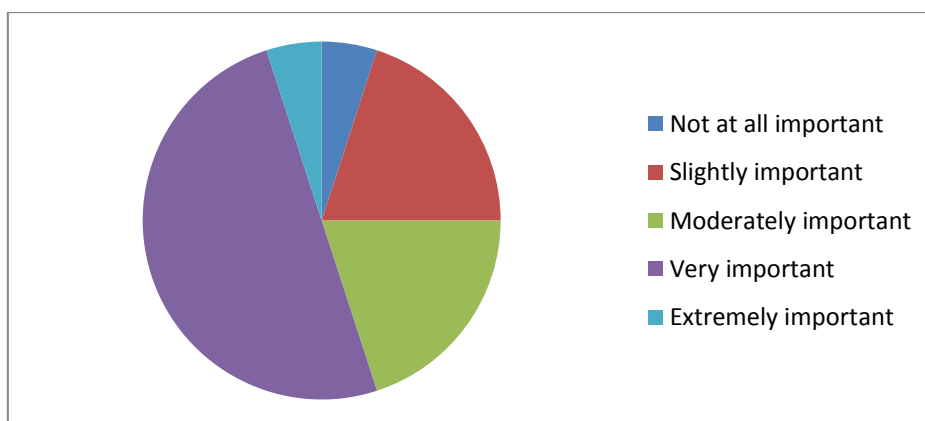


Figure 3.2 The Importance of the English Language in Pharmacy Studies

Question 06: Students' Attitudes towards the Content of the English Course

As displayed in the table below, students' responses varied according to their attitudes. 47.5% of the respondents demonstrated their dissatisfaction with the current teaching content delivered to them. The main argument they presented was that the content is not interesting and not related to their studies. According to the students' responses, it seems that 30% of them confused the meaning of relevance with

importance, as they misunderstood the question and justified their choice by mentioning the necessity of English for Medical Studies. 22.5% of the participants did not answer this question.

English course	Absolute frequency	Relative frequency
Relevant	12	30%
Not relevant	19	47.5%
No response	9	22.5%

Table 3.1 The English Course Relevance to the Field of Pharmacy

Question 07: Language Skills Classification according to Students' Immediate Purposes

As specified in the graph below, the classification of language skills differs from one student to another. It appears that 55% of the informants agreed on speaking as the most required skill for Pharmacy students. Writing and reading were assigned second place with approximately the same rating (35%) while listening seems to be in final position.

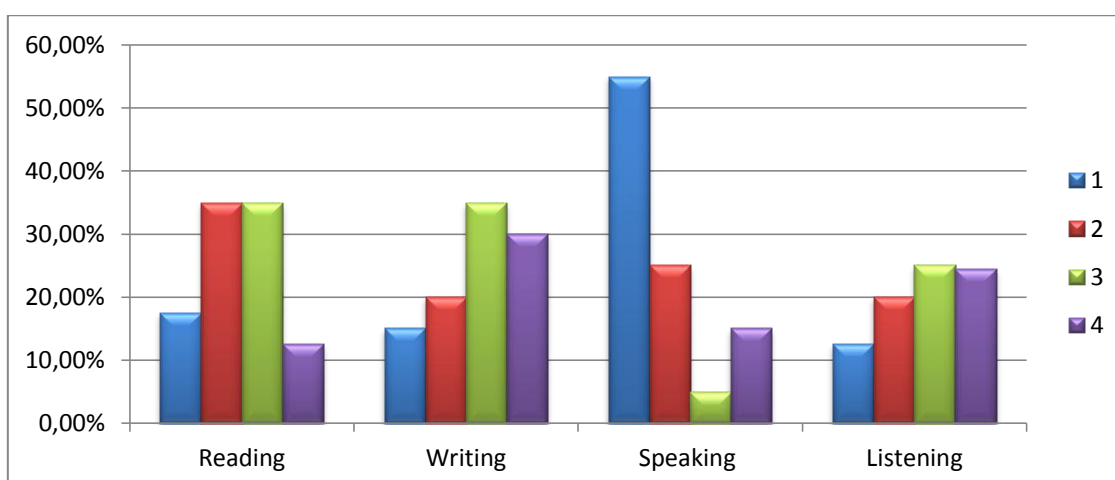


Figure 3.3 Students' Classification of Language Skills

Question 08: Students' Attitudes with regard to General and Specific English

Most of the informants (62.5%) claimed the necessity of learning Specific English, namely English for Medical Purposes. They argued that the discoveries of new pharmaceutical components and products are first reported in English. Moreover, they find it necessary to understand scientific terms that are key words for facilitating reading comprehension. However, 25% of the informants affirmed the need for General English for two reasons: to build a solid foundation in English language acquisition and to learn how to speak English for everyday use. Students' responses with regards to General and Specific English are summarized in the following table.

Students' answer	Absolute frequency	Relative frequency
General English	10	25%
Specific English	25	62.5%
General and Specific English	05	12.5%

Table 3.2 Students' Opinions in relation to Content Area

Question 09: Elements that are Crucial for Reading Comprehension

As far as reading comprehension is concerned, almost 88% of the participants reported that vocabulary learning plays an important role in facilitating this process, arguing that lexical items are critical to comprehension of texts. According to the respondents, learning vocabulary would help with the ability to infer general meaning of the topic being discussed. On the other hand, the rest of the informants (12%) selected grammar mastery as the main factor facilitating reading comprehension. The table below illustrates the informants' responses.

	Absolute frequency	Relative frequency
Vocabulary learning	35	87.5%
Grammar mastery	05	12.5%

Table 3.3 Important Elements for Reading Comprehension

Question 10: Language Activities Students consider Necessary to Pharmacy Studies:

With regards to the language activities considered as necessary, the informants' responses fluctuated as specified in the table below

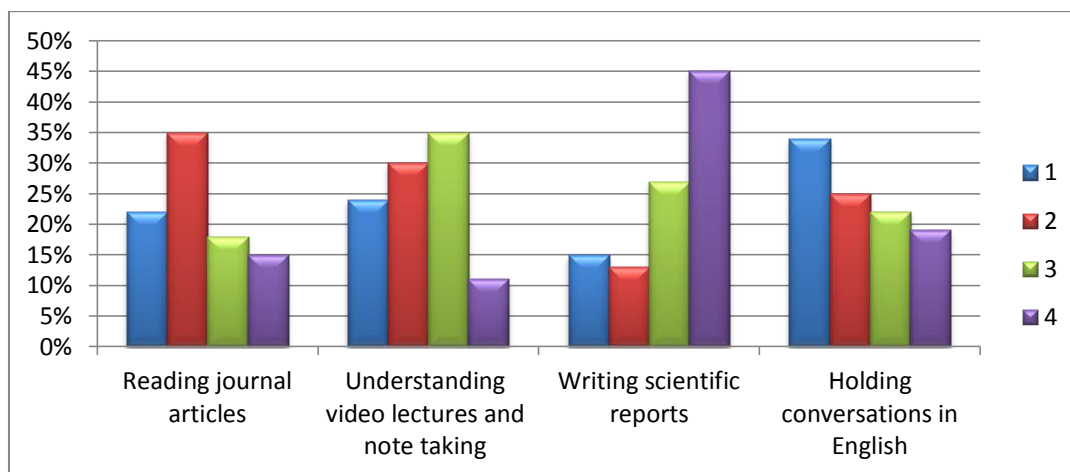


Figure 3.4 Language Activities Necessary for Pharmacy Studies

Almost 35% of the informants considered holding conversations in English as the most important activity to be developed. Then, in second place, they selected reading articles related to Pharmacy. This was followed by understanding video lectures in English and note taking which they find necessary for their studies. Almost all of the informants reported that writing scientific reports in English is of little or low importance compared to the previously stated activities.

Question 11: Language Skills Students master most

According to students' responses, 35% reported that they have a greater mastery of listening skills, while 30% consider themselves as having a good mastery of reading skills, as shown in the table below. 17.5% selected speaking and the rest of the informants (17.5%) mentioned writing.

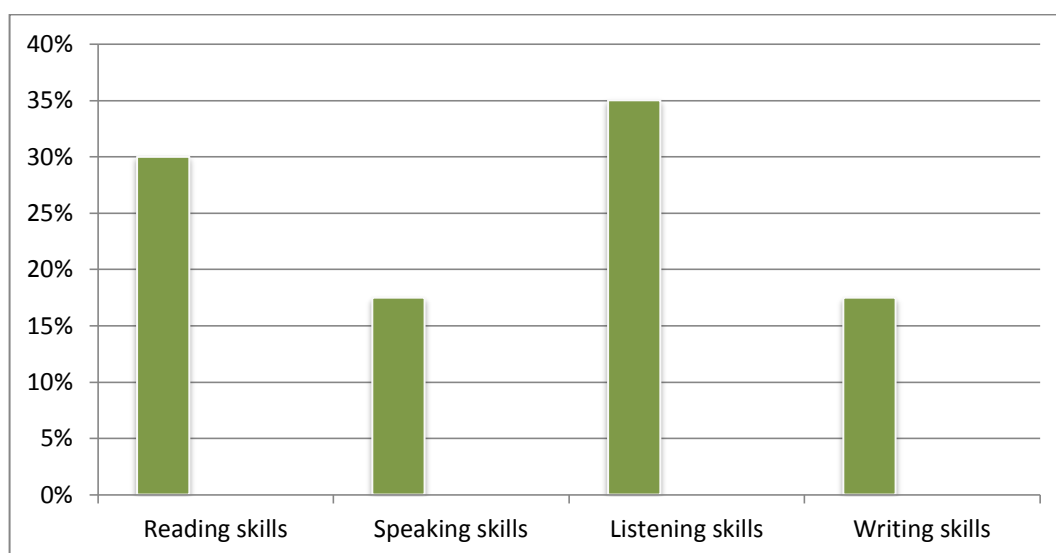


Figure 3.5 Language Skills Students master most

Question 12: The Level of Difficulty of Medical Terminology

As displayed in the table below, it is noticed that the majority of the respondents (55%) find medical terminology difficult to understand, while 40% believe it is of average difficulty, and only 5% who stated the opposite.

Level of difficulty	Absolute frequency	Relative frequency
Not difficult	02	5%
Average	16	40%
Difficult	22	55%

Table 3.4 The Level of Difficulty of Medical Terminology

Question 13: The Sources used to learn English

According to the students' responses, it appears that a high percentage of informants (75%) expand their language knowledge through watching movies, and 25% exploit their reading abilities for learning English, whereas 10% consider watching documentaries as a source of learning; magazines were mentioned by only 10%, and 32.5% selected online chat as a learning support to acquire the English language. The answers are portrayed in the following graph.

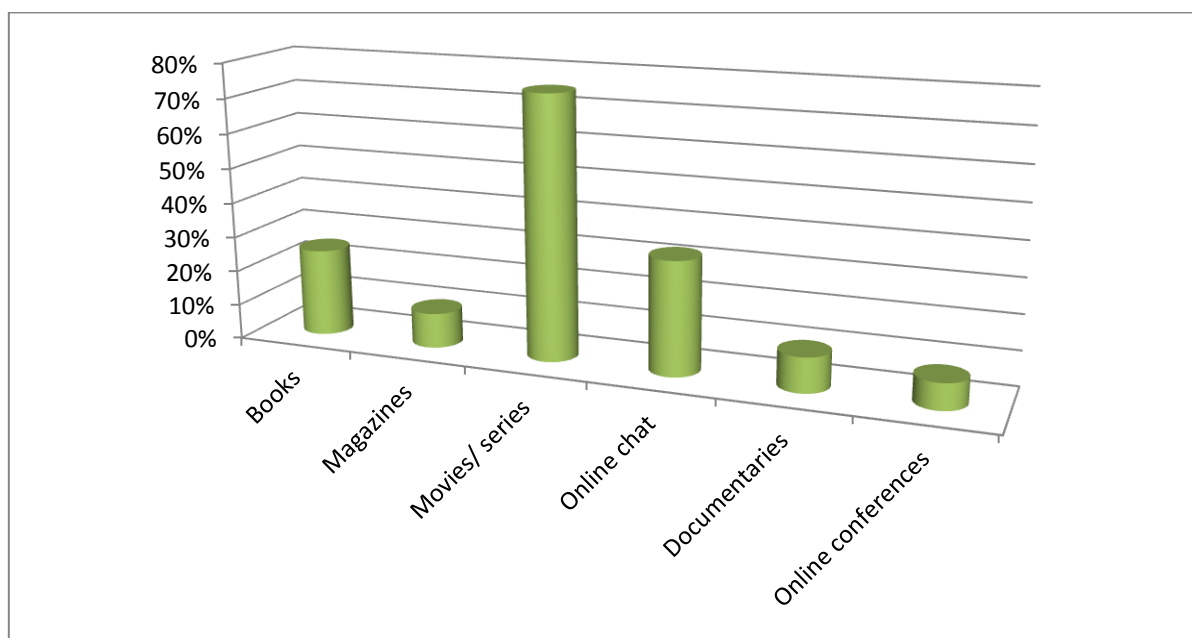


Figure 3.6 The English Sources used for Learning the Language

Question 14: Attendance Frequency

	Absolute frequency	Relative frequency
Attend	25	62.5%
Do not attend	12	30%
No response	03	6.5%

Table 3.5 Frequency of Attendance

The table above summarizes the students' answers regarding their attendance in the English class. It was reported by 62.5% of the participants that they attend the English class; however, 30% stated the opposite. The rest of the informants (6.5%) did not provide any answer.

Question 15: Frequency of Participation in the English Class

It appears that 37% of the informants always take part in classroom discussion, while 40% sometimes do. 12.5% stated that they rarely participate in the English class,

and the rest (10%) reported that they never get involved. The table below illustrates students' answers.

	Absolute frequency	Relative frequency
Never	04	10%
Rarely	05	12.5%
Sometimes	16	40%
Always	15	37.5%

Table 3.6 Frequency of Participation in the English Class

Question 16: English course delivery

As reported in the table below concerning the English course delivery for Pharmacy students, 40% of the informants stated that the lecture's content is constructed by both the teacher and the learner, whereas it was reported by 45% that the teaching content is originally prepared by the instructor and that students are called on to share and exchange information. Very few students (7.5%) mentioned that the teaching/learning process lies uniquely upon the teacher's explanation.

	Absolute frequency	Relative frequency
The teacher explains the lecture	03	7.5%
The teacher explains the lecture and asks for students' participation	18	45%
Students participate to build (construct) the lecture's content with the teacher	16	40%
No response	03	7.5%

Table 3.7: the Method adopted in delivering the English Course

Question 17: The Opportunity offered to Students to interact in the English Class

The students' answers in relation to their interaction within the classroom are reported in the following figure.

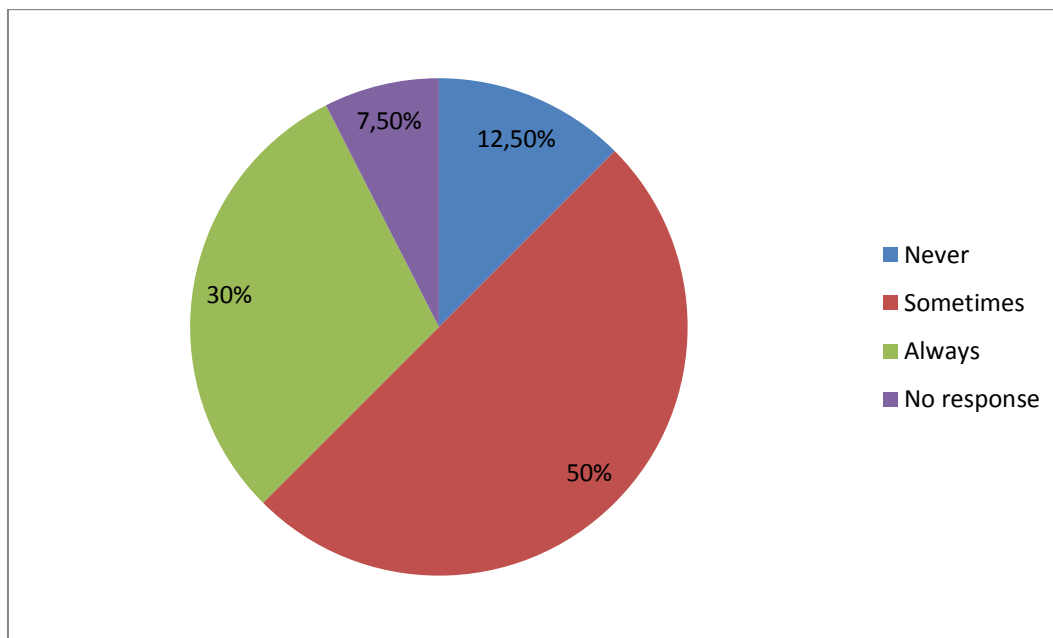


Figure 3.7 The Opportunity offered to Students to interact

It was reported by 30% of the students that there is always an opportunity to get involved in the English class. The frequency fluctuated to 'sometimes' for 50%; however, 12.5% reported that they are never allowed to take part.

Question 18: Difficulty in communicating in English

While 12.5% of the respondents communicate easily in English, the majority (87.5%) finds it difficult. 57% of them report that it is due to lack of vocabulary; others (48.57%) attribute this difficulty to inappropriate pronunciation, which may alter the meaning of the transmitted message. 25.71% state that the flow of conversation cannot be maintained due to grammatical errors. The informants' answers are summarized in the following chart.

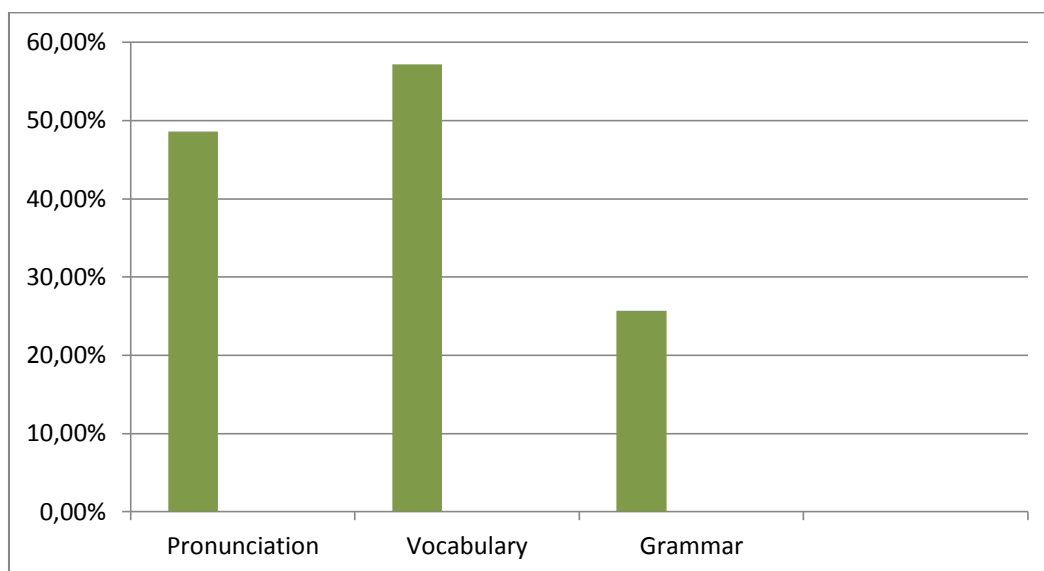


Figure 3.8 Elements that make Communication in English Difficult

Question 19: Language Skills/Components students would like to improve most

According to the answers, illustrated in the graph below, a high number of students (52% to 35%) said they most want to improve their speaking, reading and listening skills. On the other hand, 37% and 03% of the respondents stated pronunciation and vocabulary as important language components to be developed.

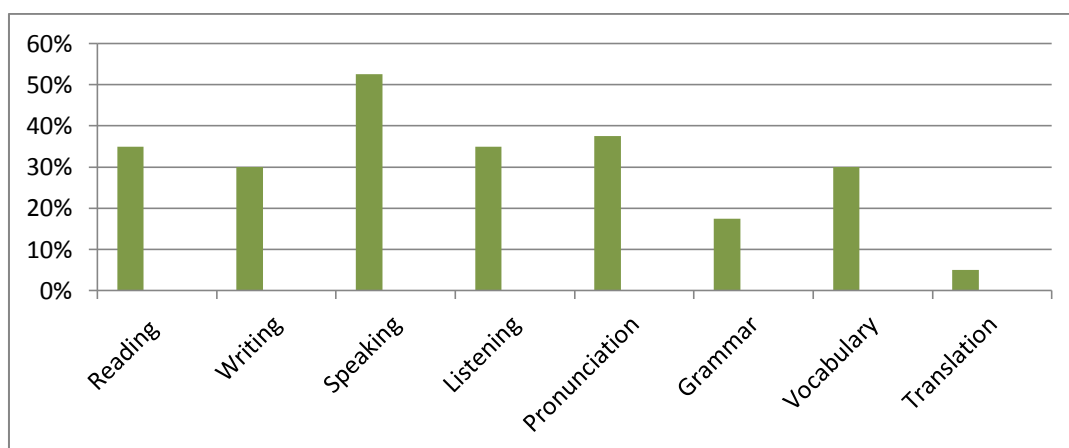


Figure 3.9 Language Components Students would like to improve most

Question 20: Students' Preferences with regards to Language Activities

Students' preferences are represented in the following figure.

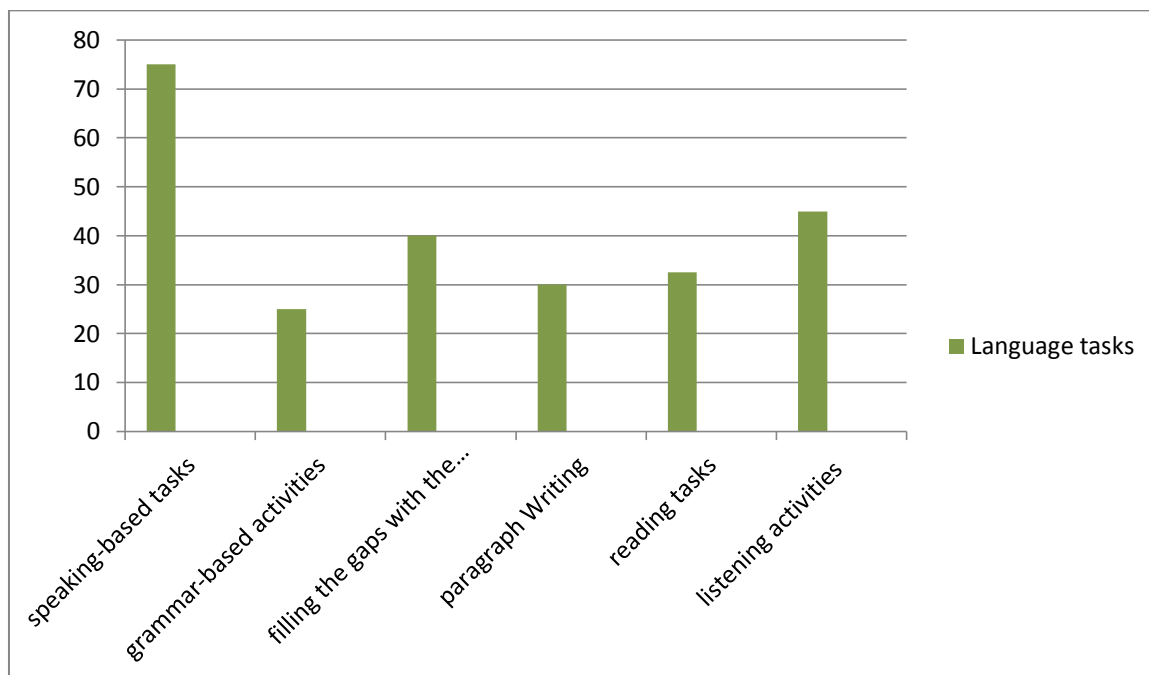


Figure 3.10 Students Preferences in regards to Language Activities

It is noticed that speaking based tasks were selected by the majority (75%) of the respondents followed by listening activities (45%) and vocabulary tasks (40%). 32.5% of the informants prefer activities that would promote reading comprehension skills. Paragraph writing and grammar-based tasks were given less importance compared with the above stated tasks.

Question 21: English Learning Objectives

It appears that 65% of the participants provided their answers to this question while the rest (35%) did not. The most common answers were to speak English fluently and communicate effectively. 30% of the respondents added that their purpose of learning English is to understand medical documents and acquire new words in English related to their field.

Question 22: Students' Satisfaction with the Current Method of Teaching English

As far as this question is concerned, only 26 respondents (76%) provided their answers, including 20% of the students who demonstrated their satisfaction towards the current method of teaching English; And 18 participants (45%) complained about the manner of instruction and the teaching content as not varied. The following table summarizes the informants' reactions.

	Absolute frequency	Relative frequency
Satisfied	08	20%
Not satisfied	18	45%
No response	14	35%

Table 3.8 Students' Perceptions of the current English Course

3.2.1.2 Interpretation

The questionnaire analysis has revealed first year students' awareness about, first, the necessity to learn English, and, second, the relevance and appropriateness of the course content in relation to the Pharmacy program. Since first year students demonstrate heterogeneity with regards to language level and find it difficult to communicate well, the majority of the informants put great emphasis on the speaking skills. There is a need to promote this productive skill through communicative activities that would also promote listening skills, that is, when listening and speaking are integrated within the same instructional task to develop communication skills.

It is also of utmost importance to develop the reading skills due to the role that the English language plays in helping students understand the literature related to Pharmacy Studies. However, students complained about the non-diversity of topics suggested by the language teacher. The qualitative data demonstrate that students need to promote their reading skills and that vocabulary acquisition constitutes an essential component in making the reading comprehension process easier and more efficient; by

inferring meaning of medical words, text comprehension will be accessible for students.

3.2.2 Second Year Students

As far as second year students are concerned, the questionnaire was distributed to 36 students in the Department of Pharmacy at Blida University, in the same period as first year students.

3.2.2.1 Results

Questions 01 and 02: Students' Profile

The first section deals with the students' profile. Questions 01 and 02 are concerned with students' gender and level. The respondents (36 students) are all enrolled in the second year of Pharmacy Studies. 30 of them are females. Their age varies between 19 to 21 years old.

Question 03: Students' Self -evaluation

As illustrated in the figure below regarding students' self-evaluation of their level of performance in English, it was noticed that 39% of students have an average level in English, while 11% and 9 % described their level as above average and high respectively. The rest of the informants 42% consider themselves having a low or below average level in English.

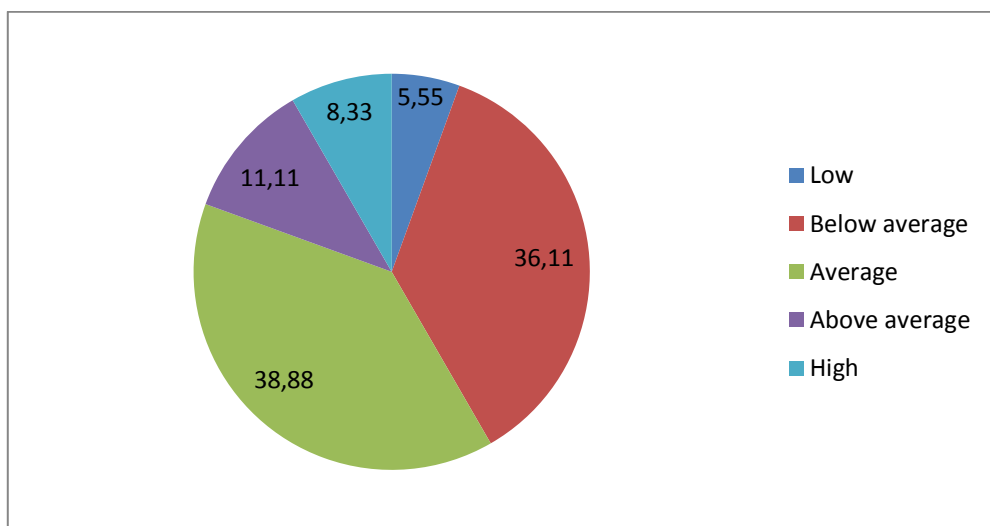


Figure 3.11 Students' Self-evaluation of the English Proficiency Level

Question 04: Students' English Experience

All the participants received English courses in formal education. Only two students attended private schools to learn the language.

Question 05: The importance of English in Pharmacy Studies

The following chart represents students' responses in regards to the importance of English.

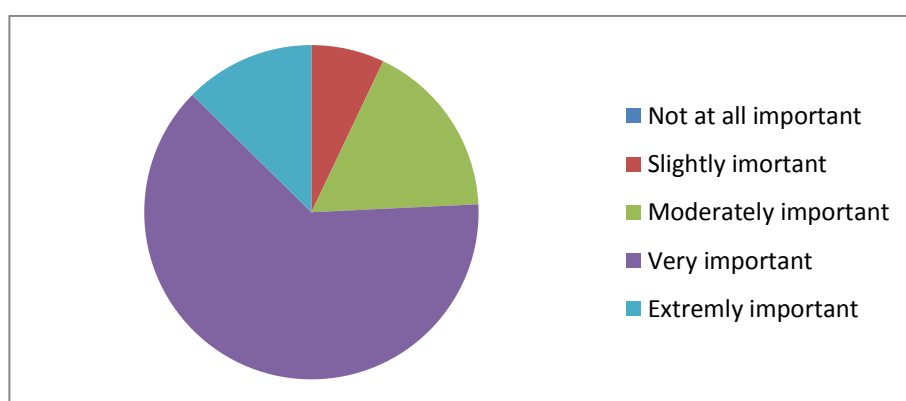


Figure 3.12 The importance of the English language in Pharmacy Studies

7% of the participants consider English as slightly important for Pharmacy Studies, whereas the rest of them (93%) indicated that it is necessary for their field. The responses varied from moderately important (17%) to very important (63%). 5 students (13%) reported that it is extremely important to learn English. None of the informants indicated that it is not at all important.

Question 06: The English Course Relevance to Pharmacy Studies

33.33% of the respondents find the English course relevant to their field of studies while nearly 45% believe it is not relevant to pharmaceutical domain. They reported that it needs to be rich and varied in terms of activities and content. However,

22.22% did not provide any answer regarding this question. The table below illustrates the informants' answers.

English course	Absolute frequency	Relative frequency
Relevant	12	33.33%
Not relevant	16	44.44%
No response	08	22.22%

Table 3.9 The Relevance of the English Course to Pharmacy

Question 07: Language Skills Classification according to Students' Immediate Purposes

Half of the students (50%) selected speaking as the most needed skill for their studies. 47% of the respondents chose reading, and then listening was classified as the third skill (44%), followed by writing (50%) at the end. The respondents' answers are summarized in the figure below.

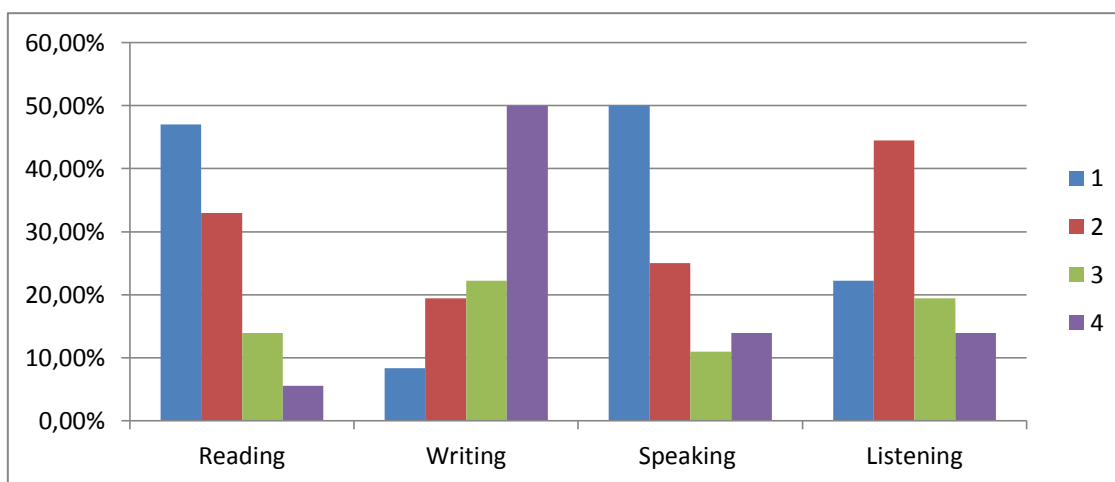


Figure 3.13 Students' Classification of Language Skills according to their Immediate Purposes

Question 08: English lessons with regards to General and Specific English

Students' answers concerning General and Specific English learning are summarized in the table below.

Students' answer	Absolute frequency	Relative frequency
General English	06	16.67%
Specific English	11	30.55%
General and Specific English	19	52.77%

Table 3.10 Students' Opinions in relation to Content Area

For this question, 16.67% of the respondents have chosen General English as a basis for their English lessons. However, the majority of them (52.77%) have chosen both options: General English and Specific English. They justified their choice by reporting that General English lessons should go hand in hand with an EMP course; starting with General English to build a solid language basis then moving to the English terminology related to Pharmacy studies. The rest of the participants (30.55%) have chosen Specific English, saying only that it is the most needed for their studies.

Question 09: Elements that are crucial for the Reading Comprehension Process

Almost 72% of the students reported that vocabulary is mostly important to the reading comprehension process. They argued that appropriate understanding of vocabulary items helps to reach text comprehension. The rest of the participants (28%) selected grammar mastery as the main element facilitating the reading comprehension process. The table below illustrates the informants' answers.

	Absolute frequency	Relative frequency
Vocabulary learning	26	72.22%
Grammar mastery	10	27.78%

Table 3.11 Important Elements for Reading Comprehension

Question 10: Language Activities Students consider necessary to Pharmacy Studies

As far as this question is concerned, the first activity which revolves around reading comprehension has been chosen by almost 42% of the participants and ranked

as number one among other activities. The respondents classified activities that enable them to understand video lectures and learn how to take note in second place. The following selected activity in third place is about organizing conversation to practice and improve speaking. Writing scientific reports has been ranked number four by half of the respondents. Students’ answers are represented through the following figure.

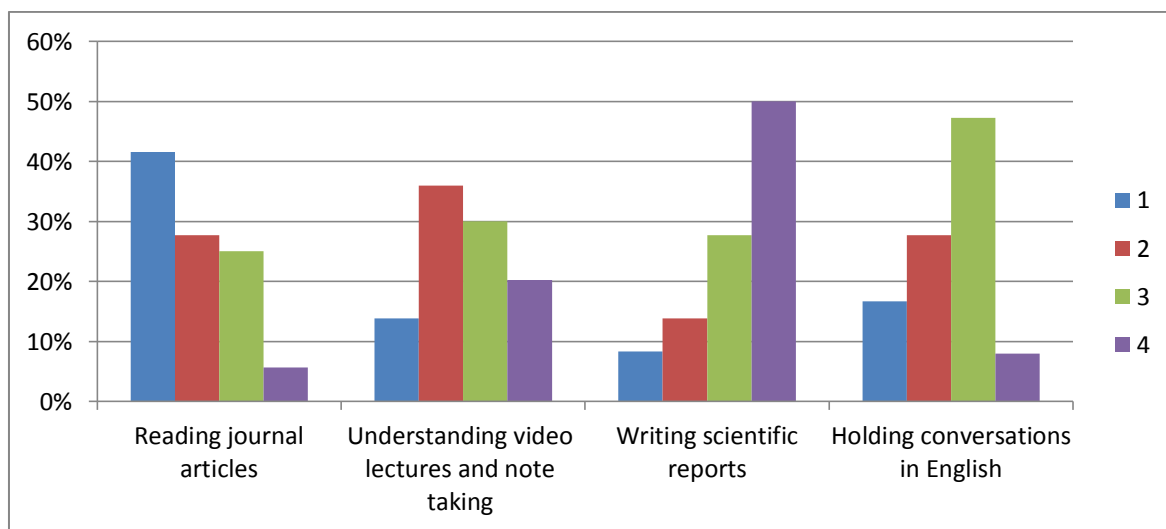


Figure 3.14 Language Activities Necessary for Pharmacy Studies

Question 11: language skills students master most

Students’ responses about their language abilities are reported below.

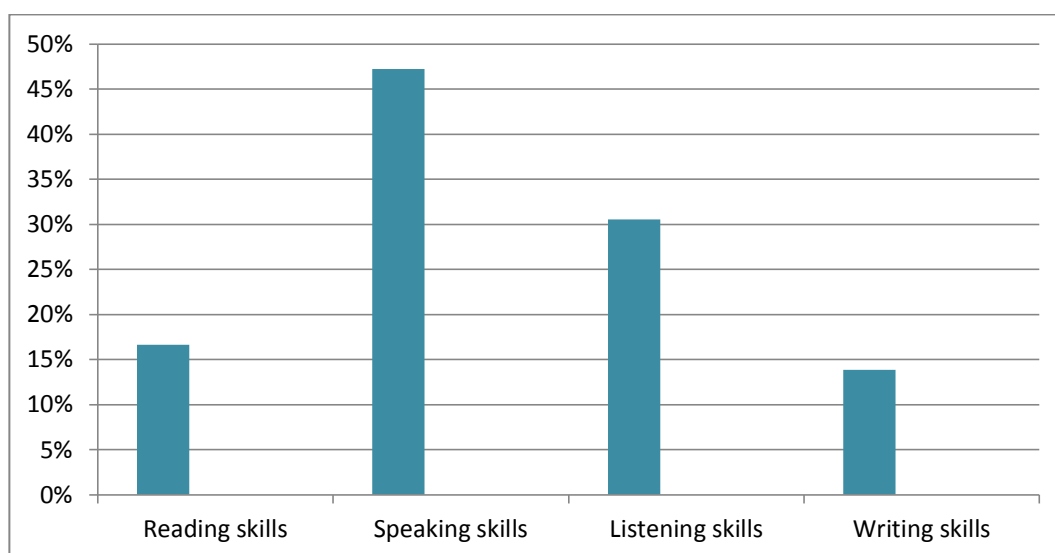


Figure 3.15 Language Skills Students master most

Almost 48% of the participants reported that speaking is the skill that they master most, followed by listening (25%) then reading (16.66%) and finally writing (13.88%).

Question 12: The Level of Difficulty of Medical Terminology

It is noticeable through the students' responses, reported in the table below, that for the majority of them (almost 53%) medical terminology in English is difficult, whereas according to 38.89% of the participants, it is estimated of average difficulty, and the minority (8.33%) finds the medical terminology not difficult.

Level of difficulty	Absolute frequency	Relative frequency
Not difficult	03	8.33%
Average	14	38.89%
Difficult	19	52.78%

Table 3.12 The Level of Difficulty of Medical Terminology

Question 13: Sources used to learn English

It is noticed that a large number (which represents 59%) of the participants learn English through watching movies. However, compared to first year students,

almost 50% of them acquire the language from books and magazines (26%) that they read in English. While 25% of the students reported that they use online chat to learn English, 29% of them watch documentaries in English. In addition, more than 35% watch video conferences, through social media, for the purpose of enhancing their English language mastery. The following figure illustrates students' answers.

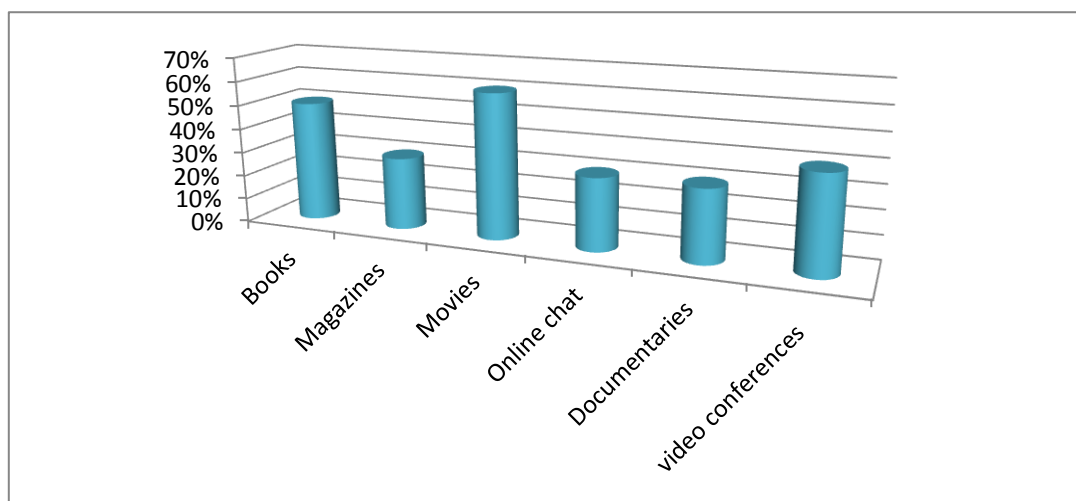


Figure 3.16 Sources used for learning the language

Question 14: English Class Attendance Frequency

As far as this question is concerned, it appears that a minority of the participants (27.78%) attend the English class while 61.11% of them do not. They argued that the teaching content is not relevant to their field and the lessons are quite often repeated. The following table reports the informants' reactions.

	Absolute frequency	Relative frequency
Attend	10	27.78%
Do not attend	23	63.88%
No response	03	8.33%

Table 3.13 Attendance Frequency

Question 15: Frequency of Participation in Class

In regards to students' involvement in the English class, the following table illustrates students' answers.

	Absolute frequency	Relative frequency
Never	03	8.33%
Rarely	00	00%
Sometimes	06	16.68%
Always	02	5.57%
No response	25	72.22%

Table 3.14 Frequency of Participation

Only 11 students (30.55%) out of 36 responded to this question. 16.68% of the respondents sometimes participate in the English class, and 5.56% never do. Then it appears that it is only a minority of the students (5.56%) who always provide and share their responses in the English class.

Question 16: English Course Delivery

The students' answers about the method used to deliver the English course vary according to their viewpoints on the teaching. The majority of the students (61.11%) reported that during the English class the teacher delivers the lesson then gives the students the opportunity to participate. Only 11.11% mentioned that they co-construct the lecture's content in collaboration with the teacher. It is also noticed, according to 19.45% of the students' responses, that the teacher provides the lesson's content without students' interaction. 8.3% of the participants did not provide any answer. Students' answers are summarized in the table below.

	Absolute frequency	Relative frequency
The teacher explains the lecture	07	19.45%
The teacher explains the lecture and asks for students' participation	22	61.11%
Students participate to build the lecture's content with the teacher	04	11.11%
No response	03	8.33%

Table 3.15 English Course Delivery

Question 17: The opportunity offered to students to interact in the English class

Concerning the opportunities given to students to get involved in the teaching content, 83.32% of the participants mentioned that the English teacher sometimes gives them the opportunity to participate whereas others (6%) said s/he always does, as illustrated in the figure below. However, 11% of them reported that there are no favorable circumstances for classroom interaction.

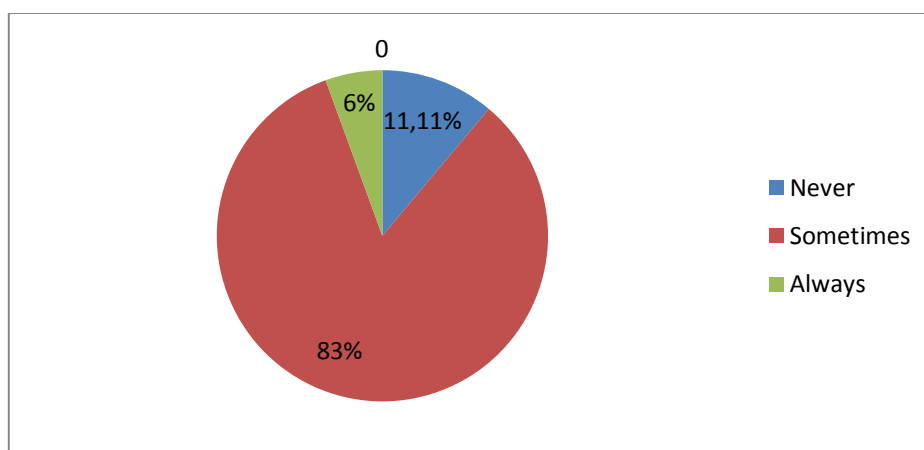


Figure 3.17 The opportunity offered to students to participate

Question 18: Difficulty in communicating in English

Regarding the difficulty of communication, the informants provided different language elements that prevent efficient communication in English, as displayed in the following figure.

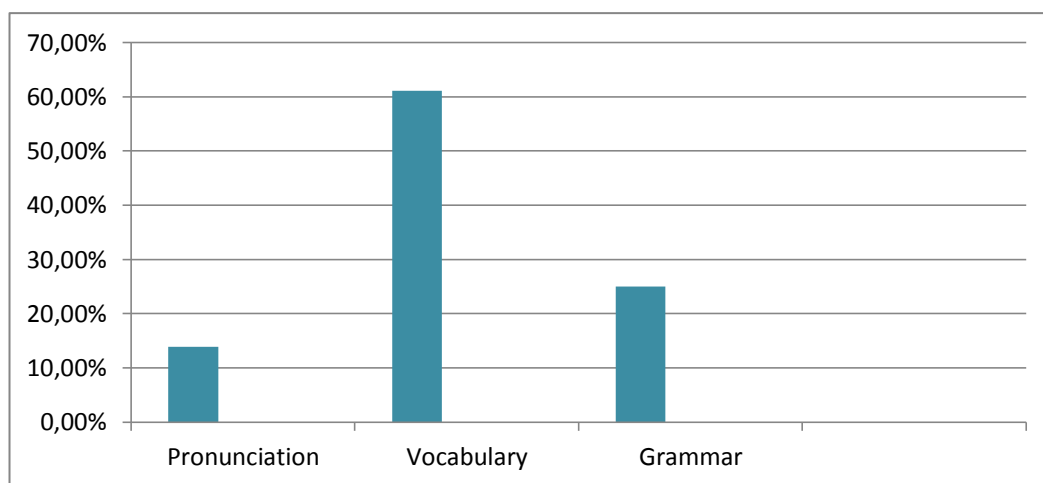


Figure 3.18 Elements that make Communication in English Difficult

It appears that 67.11% of the students find it difficult to communicate in English and they selected the language elements that they believe are obstacles to communication. A high percentage of the informants (61%) reported that this is due to lack of vocabulary, while 19.44% reported that grammar mistakes prevent them from communicating well. It is also noticed that pronunciation is a communication barrier for 33.33% of the respondents.

Question 19: language Skills Students would like to learn most

It appears from the responses of this question that a significant number of students (75%) would like to improve their reading skills, followed by 69% who want to ameliorate their speaking skills, then almost 50% showed a desire to acquire vocabulary. After speaking and reading, 44% selected listening then writing was mentioned only by 22%. Pronunciation, grammar and translation were selected by a low percentage of students (33.33%, 27.77% and 11% respectively). Students' preferences are illustrated in the following figure.

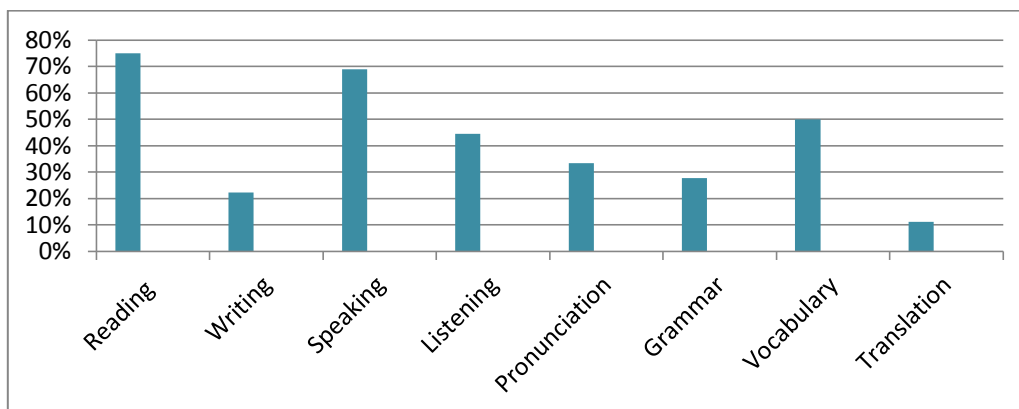


Figure 3.19 Language Components Students would like to improve most

Question 20: Students’ Preferences with regards to Language Activities

Second year students’ responses regarding language tasks differ considerably, as shown in the following figure.

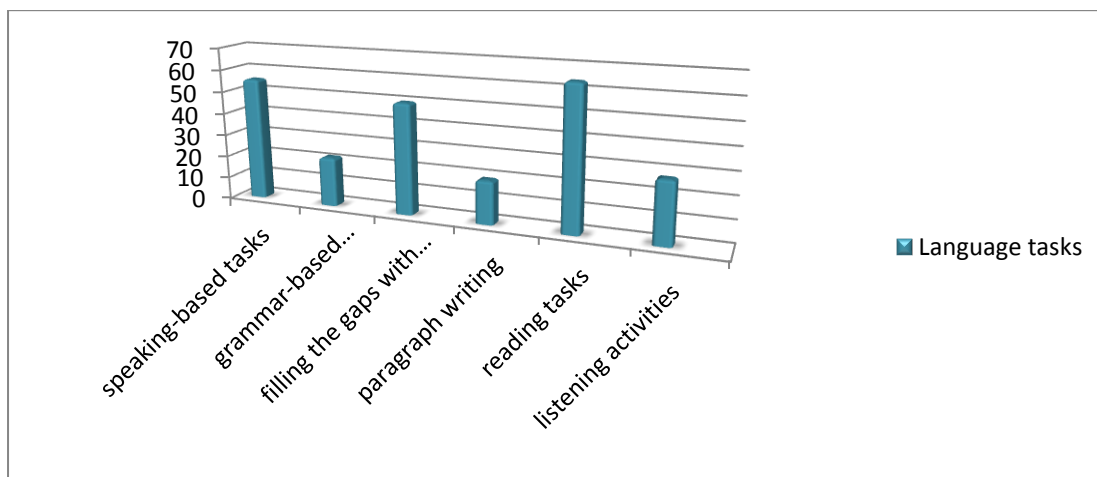


Figure 3.20 Students Preferences in regards to Language Activities

It is remarkable that the students mostly prefer reading-based tasks, then speaking-based and vocabulary activities as it was respectively reported by 63.88%, 55.55% and 50% of them. Listening activities, grammar-based tasks and paragraph writing were granted less importance compared to other skills.

Question 21: English Learning Objectives

The answers reported by almost 80% of the participants indicated that the main objectives are to attain a good command of the English language, to develop the ability to read and understand scientific texts well, and to improve speaking and communication skills. 20% of the respondents mentioned carrying out further research in their field in English as a learning objective.

Question 22: Students' Satisfaction with the current Method of Teaching English

Concerning the students' opinions towards the current method of teaching English in the Department of Pharmacy, there were 25% of them who did not provide any answer and a minority (19.44%) responded to this question positively, as shown in figure 4.18 below. The rest of the participants (55.56%) were not pleased with the teaching method and suggested the use of teaching methods appropriate to their level and area of interest. Moreover, they also mentioned the teaching of grammar in context and the use of games and stories to acquire vocabulary and communication skills.

	Absolute frequency	Relative frequency
Satisfied	07	19.44%
Not satisfied	20	55.56%
No response	09	25%

Table 3.16 Students' Satisfaction with the Teaching Method

3.2.2.2 Interpretation

To recapitulate the findings, the informants, who are 2nd year Pharmacy students, demonstrate their interest in learning the English language, and through their responses it is clear that English is very important with regards to Pharmacy Studies. Moreover, through the data collected it is revealed that a high percentage of the informants most

avored the acquisition of the reading skills and selected the activities which promote them.

It is also clear that the informants highlighted the necessity to improve their communication and speaking abilities in a learning environment where students wish to be encouraged to participate and build the lesson's content together with the instructor. In addition, it is necessary for them to enrich their vocabulary knowledge and be equipped with the specific terminology needed in their field. They also mentioned developing listening skills to better comprehend an online-lecture delivered in English. Through implementing communicative tasks, students will not only improve both speaking and listening skills, but also their communication abilities needed for their academic career.

It appears that first and second year students' responses differ in many aspects. First of all, second year students' awareness of the necessity of the English language is more significant than it is for first year students as they already have an experience of almost two semesters of English. They realize that learning English does not only consist of Medical English, rather, general English should constitute the basis for acquiring the language. Also, the highest priority is granted to developing the ability to read articles related to Pharmacy Studies rather than engaging in conversational tasks (which was the first task selected by first year students, as they believe they need it most).

Second, concerning the students' lacks, students' language skills mastery varies from one level to another. Second year students find difficulty in reading comprehension, while for first year students it is beyond their abilities to hold a viable conversation in English. In contrast to first year students, second year students do not attend the English class frequently, as they are not offered an opportunity in each session to interact and build the lesson's content with the teacher, which is not motivational for them. Also, the major problem in communication, according to first

year students' answers, is pronunciation, contrasting with second year students, who do not consider this as much as an obstacle to good communication as vocabulary.

Finally, first year students would most like to improve their oral/aural skills through speaking- and listening-based activities that would enable them to perform well in communicative situations. However, besides speaking, second year students generally prefer to improve their reading as a receptive skill, by means of reading-based tasks and vocabulary activities that will facilitate the process of comprehension.

3.2.3 Post-graduate Students

Through the questionnaire addressed to post-graduate Pharmacy students the researcher aims at revealing the importance of acquiring the English language in relation to Pharmacy Studies. The purpose is to gather information about the necessity of English at a higher academic level by assessing the necessary language skills, in order to determine the means to reach communication in English, that is, the by investigating the learning needs.

3.2.3.1 Results

Questions 01 to 04: The Informants' Profile and Language Experience.

The informants were 08 females and 2 males. Three students were enrolled in the first year postgraduate Microbiology program, whereas the rest of them were enrolled in the second year, following different specialties: Genetics, Microbiology and Biochemistry. Concerning the proficiency level in English, most of the students (eight) consider themselves as having an average level in English; however, two of them evaluate their level as being below average. With regards to students' language experience, all students assert that they received English lessons during their secondary education, that is, two years at middle school and three years at high school. However, the English course was not part of their undergraduate Pharmacy program.

Questions 05 and 06: The Importance of the English Language with regards to Pharmacy.

The ten participants emphasized the importance of the English language with reference to their studies and in their working situations. All of them stated that it is very important to learn this language, particularly Specific English, that is, Pharmaceutical English. Three students added that it would be beneficial to take General English classes first, and then move on to acquiring English that is specifically needed for pharmaceutical field.

Questions 07 and 8: Language Skills and Activities that Students consider Necessary to Pharmacy Studies.

The ten participants emphasized primarily the reading skills. Seven students put speaking skills in secondary position, whereas the rest selected the listening skills. Most of the students (seven) classified the listening skill as the third most required skill. Eight participants allocated the fourth position to writing skills.

Students were provided with various language tasks to select the ones most needed for pharmaceutical studies and work situations (as most of them work in laboratories within hospitals). All of the respondents selected “reading journal articles” as the most important task, to train students how to comprehend a medical text written in English. 80% encouraged holding conversations on scientific topics, and 60% chose understanding video conferences. Finally it is noticed that note-taking and writing reports were recommended only by 30%. The following figure displays the students’ answers.

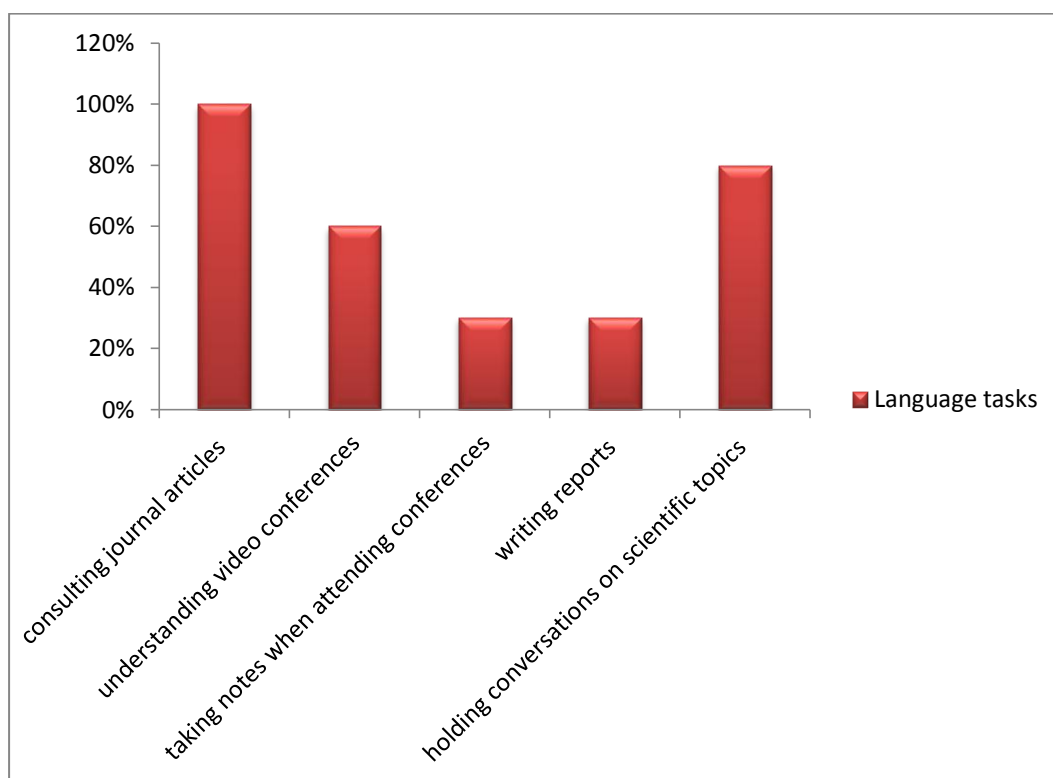


Figure 3.21 Language Tasks Students consider necessary to their Studies

Question 09: Vocabulary in Reading Comprehension.

The ten respondents selected vocabulary as an important element to facilitate the reading comprehension process. Three students justified their choice by reporting that it is necessary to clarify the meaning of scientific terms to get the overall meaning of any text.

Questions 10 and 11: Students' self-evaluation of Language Skills and Vocabulary Learning.

In response to this question, most of the students' answers aligned with listening and speaking. They attribute their choice to the fact that they can understand short sequences of English recordings; also they can communicate in English through online chat or text messaging. Only two students selected reading and listening as the more accomplished skills. In relation to the understanding of medical terminology, seven

participants find it difficult, whereas three of them responded that it is of average difficulty.

Question 12: Sources that Students use to learn English

The common sources for learning English, as stated by the majority of the respondents, are movies and magazines. Three participants selected “books”, while only two reported that they use online chat to learn English.

Question 13: the Difficulty encountered in Communication

Nine out of ten participants stated that they find it difficult to communicate in English, as shown in the following table.

	Absolute Frequency
Pronunciation	0
Lack of vocabulary words	10
Grammatical mistakes	2

Table 3.17 Language Components that make Communication difficult

According to the informants, difficulty is predominantly due to lack of vocabulary, since sometimes they do not know the meaning of a given term and how to properly use it. Two students added that grammatical errors could also inhibit good communication in English.

Questions 14 and 15: Students’ Preferences with regards to Language Skills and their Learning Objectives

Most of the students noted that they would most like to improve their reading and speaking skills, along with vocabulary development. Listening and writing were mentioned by four students who also expressed their desire to develop their pronunciation and formulate sentences which are grammatically correct

Concerning the learning objectives, all the respondents agreed on the same primary objective, which is to promote the understanding of the medical/pharmaceutical literature written in English. They reported that understanding scientific terms would help them best achieve a thorough understanding of any reading material. Also, seven students emphasized that they need to enhance their communicative abilities and interactional skills. Three students expressed their need to develop their writing skills, in order to write clinical protocols and have them interpreted and corrected by foreign professors.

Question 16: Students' Suggestions for an effective Teaching Method for Pharmacy Students

Six out of ten respondents pointed out that it would be interesting to implement communicative tasks to help students improve their oral/ aural skills. Three respondents added that the use of ICTs plays an important role in enhancing these skills. With regards to vocabulary and grammar, three students suggested students could be given scientific texts to read, and vocabulary terms related to a certain topic could be selected for learners to use in oral and written production. It was also suggested by four students that the teaching content might be varied in relation to the different specialties that students would be enrolled in later.

3.2.3.2 Interpretation

The data collected from the postgraduate students' questionnaire reveals students' interest in learning English in connection with its stated importance for their studies and their work. The respondents emphasized the necessity to develop the reading and speaking skills, particularly. In order to enhance those skills there is a need to promote language tasks which revolve around reading and understanding the literature related to Pharmacy, as well as holding conversations with English speaking people, since they reported that they use English in online chatting. The findings also explain that vocabulary plays an important role in making any reading material easily comprehensible to the students, so there should be an emphasis on vocabulary,

especially since all of the informants associate difficulty in communicating in English with a limited vocabulary range. The responses also reflect the learning objectives as reported by students, comprising mainly understanding the medical literature, including scientific terms and promoting interactional skills. The means suggested for reaching the pre-mentioned objectives, that is, learning needs, include vocabulary activities, communicative tasks and content variation.

3.3 Pharmacists' Questionnaire

The following sample consists of 8 medical representatives, 4 technician pharmacists, 4 product managers and 4 clinical pharmacists. The purpose from the stratified sampling is to deal with the importance of the language from different professional sectors. The questionnaire aims at obtaining information about the importance of communication in English with regards to professional settings. Also it targets the skills and language components necessary for Pharmacy students to reach communicative competence.

3.3.1 Results

Question 01: Pharmacists' Field of Work

The informants have all pursued Pharmacy Studies, however, they work in different sectors. There are 8 medical representatives, 4 product managers working in the marketing department, 4 working at the hospital and 4 working as technician pharmacists in the industrial sector. The table below summarizes the responses.

Profession	Frequency
Medical representatives	08
Product managers in the marketing department	04
Pharmacist at the hospital	04
Technician pharmacist	04

Table 3.18 Pharmacists Professions

Question 02: Self-evaluation of Proficiency Level

The proficiency scale used in this question is based on CEFR levels in job résumés. The informants exhibit different levels of English Language proficiency. It appears that 50% evaluate their English level as intermediate, 15% as upper-intermediate, and 20% think they have reached the advanced level. The rest of the informants (15%) are below the average level of English proficiency. The following figure illustrates the informants' answers.

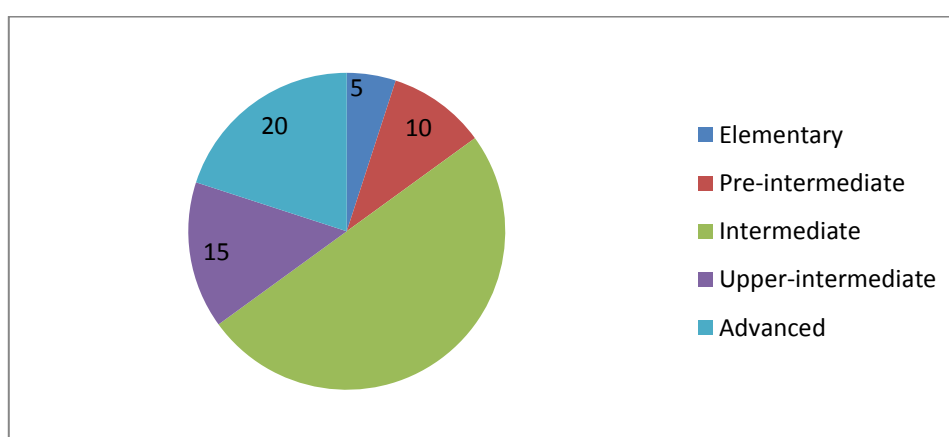


Figure 3.22 Self-evaluation of English Proficiency Level

Question 03: The Informants' Background Knowledge in English

The information gathered about the pharmacists' background English knowledge is summarized in the following table.

	No	Yes	
		General	Specific
Absolute frequency	08	08	04
Relative frequency	40%	40%	20%

Table 3.19 English Background Knowledge

It appears that 60% of the participants received English lessons at university and 40% did not. As far as the English language is concerned, 4 (around 20%)

pharmacists attended a Medical English course for a short period (between 3 to 8 months) and the rest of the informants (40%) studied general English.

Questions 04 and 05: The Importance of Communication in English with regards to work sectors and Literature in Pharmacy

All the participants agreed on the fact that English is essential in their professional area. 75% of the pharmacists reported that communication is an indispensable working tool: English is widely used in partners' contact, via emails or phone calls, to make a product order and negotiate pricing. They also mentioned the necessity of having communicative skills and a good command of English when attending or participating in international exhibitions for pharmaceutical products, even for a training organized by international companies in or outside Algeria. Only pharmacists working in hospital laboratories (15%) did not highlight the necessity of using English in their working context; however, they stated, and share the same opinion as others, that all information updates about medical devices and drugs and all useful documents are written in English. All the participants agreed that consulting the literature related to Pharmacy in English is very important.

Question 06: The Importance of English in relation to Pharmacy Studies

It is noticed that the majority 60% of the informants believe that English is very important and 25% of them mentioned that it is extremely important. Only the minority (15%) consider the acquisition of the language as moderately important. None of the respondents stated that it is either slightly or not important. The answers are displayed in the figure below.

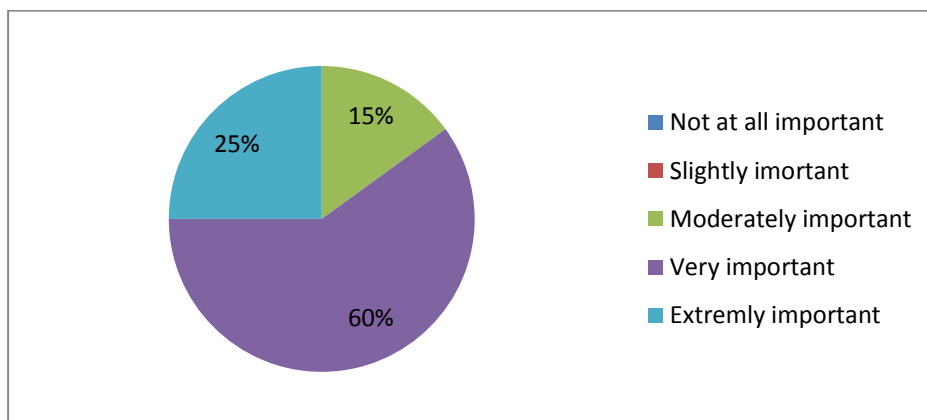


Figure 3.23 The Importance of the English Language in Pharmacy Studies

Question 07: Skills Importance

The question deals with the language skills that Pharmacy students need to improve most. The following figure provides findings based on pharmacists’ opinions.

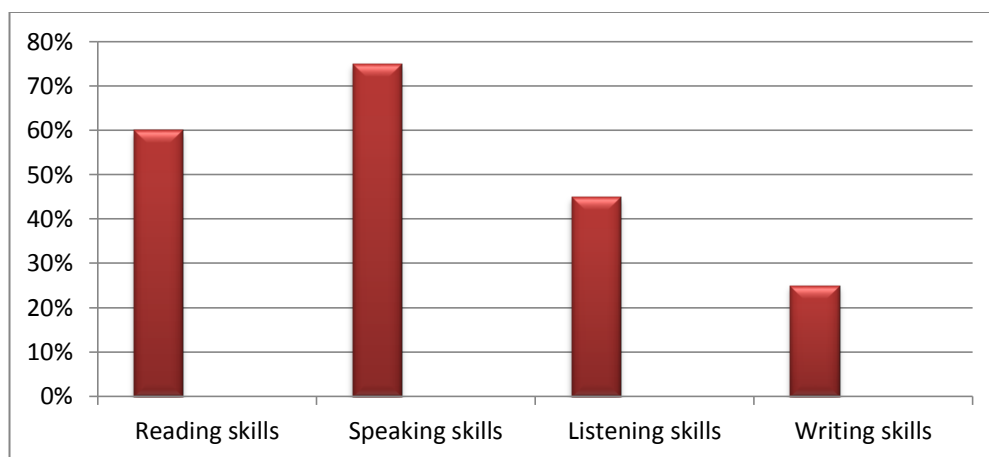


Figure 3.24 Language Skills Pharmacy Students need to improve most

According to the pharmacists’ answers, it appears that 75% of them consider that it is vital to develop speaking skills; 60% highlighted the importance of promoting reading skills to help students read and comprehend the latest literature on Pharmacy; 45% emphasized listening skills; whereas writing skills were given less importance (25%).

Question 08: The Impact of acquiring English Terminology on students' Academic and Professional Careers.

All the pharmacists argued that it is a necessity to help students enrich their English vocabulary for medical purposes. They noted that acquiring vocabulary is very useful in comprehending scientific and medical articles which help both students and professionals to improve their knowledge about medical and pharmaceutical products. It was also stated that it is necessary to equip oneself with a range of vocabulary to enable exchange of information and communication amongst students and pharmacists belonging to the same level or field of work.

3.3.2 Interpretation

From the data obtained, the pharmacists clearly highlighted the importance of the English language to their domain, recommending that students promote their reading particularly, to be able to read documents in English, and also for students to develop a good command of medical terminology and its appropriate use. The informants also focused on communication in workplace situations referring to the requirement for English at the international scale, for instance, when attending pharmaceutical products exhibitions or dealing with foreign partners. Therefore, students need to improve their communication skills, mainly speaking, to be able to manage these situations, and then to ameliorate their listening abilities.

3.4 Subject Specialists' Interview

Ten subject specialists, who teach different modules, were selected from the Department of Pharmacy at Blida 1 University to attend the interview. It was designed to highlight the importance of English, uncover students' necessities in the pharmaceutical domain and explore the way to attain communicative competence in English, that is, to determine the learning needs. It consists of 15 questions divided into three rubrics: the informants' profile, the importance of English and the skills that Pharmacy students need to master most, and the appropriate language tasks/activities that help students reach communication.

3.4.1 Results

Questions 1 to 3: Teachers' Educational Profile

The respondents are subject specialists, teaching undergraduate and post-graduate pharmacy students in the department of Pharmacy at Blida1 University. All the informants are holders of a Doctoral degree in Medical studies. Seven teachers obtained degrees in specialized medical studies (DEMS), but only three of them had pursued Medicine Studies, obtaining doctorates in Biochemistry, Pharmacology and Physiology respectively. All the informants have from six to 27 years' teaching experience. Four of them are professors in the Department of Pharmacy and fully aware of students' real needs in relation to English language learning.

Questions 4 and 5: Teachers' Proficiency Level in English

Most of the respondents (7), 4 assistant teachers and 3 professors, determined their English language level as intermediate and upper-intermediate respectively. They reported that they did not have English courses during their Pharmacy program but they were enrolled in private learning, either in the Department of Intensive Teaching of Foreign Languages at the university or in private language centers. Only one professor holds an advanced learner certificate. The results are summarized in the following table.

Elementary	Absolute frequency
Elementary	0
Pre- intermediate	2
Intermediate	4
Upper-intermediate	3
Advanced	1

Table 3.0.20 Teachers' Language Proficiency Level

Questions 6 to 8: the Importance of English for students of Pharmacy studies

All the informants highlighted the importance of English with regards to the Pharmacy Studies program in General and Specific modules in particular. Seven teachers reported that it is extremely important to learn the language, whereas the rest of them (3) stated that it is very important for Pharmacy Studies, as shown in the following figure.

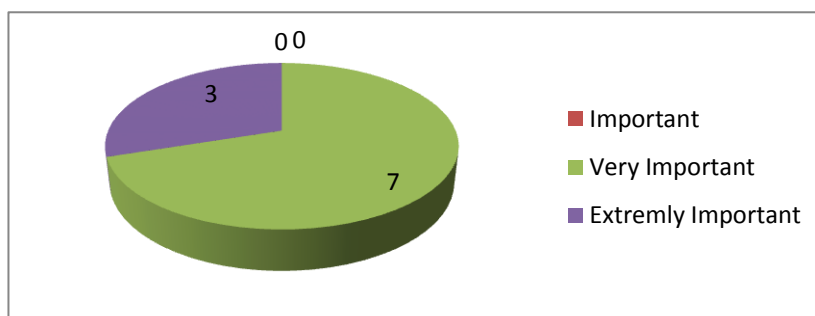


Figure 3.25 Importance of English

Most of the teachers (9) added that many scientific articles relevant to the different modules they teach are available in English. It is also necessary to have knowledge of English in order to prepare for lectures, since almost all the latest literature on Medical Studies is in English. The respondents also pointed out that academic writing for international publication requires a good mastery of the English language.

The teacher in charge of Hydro-Bromatology, a module taught to fifth year Pharmacy, reported that this module was created after a Canadian Anglo-Saxon school, and that English-speaking Canadian territory is mostly known for its advancement in this field. So, he insisted that first and second year should learn and improve English language skills to reach an advanced level in the fifth year. He also added that the English course should be extended to everyone in the sixth year of Pharmacy Studies. Moreover, the professor who teaches Mineral Chemistry revealed the importance of English in his area of expertise by indicating that, in the literature of

Pharmacy, protocols describing chemical experiments are written in English. This makes it a necessity for students to master the language.

Question 09: the Language Skills that Students most need to develop

The informants emphasized the importance of reading skills and classified reading comprehension as the most required skill for the students. Secondly, seven teachers recommended that students need to improve their speaking skills so as to be able to communicate in international scientific meetings and conferences. Five of them highlighted that speaking goes hand in hand with listening, so this also needs to be promoted to offer the students the opportunity to understand online conferences, on YouTube, for example. The rest of the respondents (3) stated that the second language skill to be promoted is writing. They added that it is of utmost importance for the student who wishes to go beyond postgraduate studies to have a good command of writing skills so as to be able to write abstracts and scientific articles.

Questions 10 to 11: The Use of English in academic and professional Contexts

All subject specialists agreed upon the fact that it is necessary for students to learn English since it is required in particular situations (as shown in Table 4.23). Ten respondents reported that reading the literature, is indispensable, therefore it is crucial to learn the language to be able to read any text in English. Four teachers selected writing abstracts and publishing research work as beneficial, including the three professors, who believe it is an important scientific activity to be involved in, in order to be considered for promotion. Five teachers chose international conferences, where students are likely to need to communicate in English. Likewise, all the informants endorsed the fact that pharmacists in the workplace need to develop English language competence, especially those who work in pharmaceutical laboratories, research centers and teach at university.

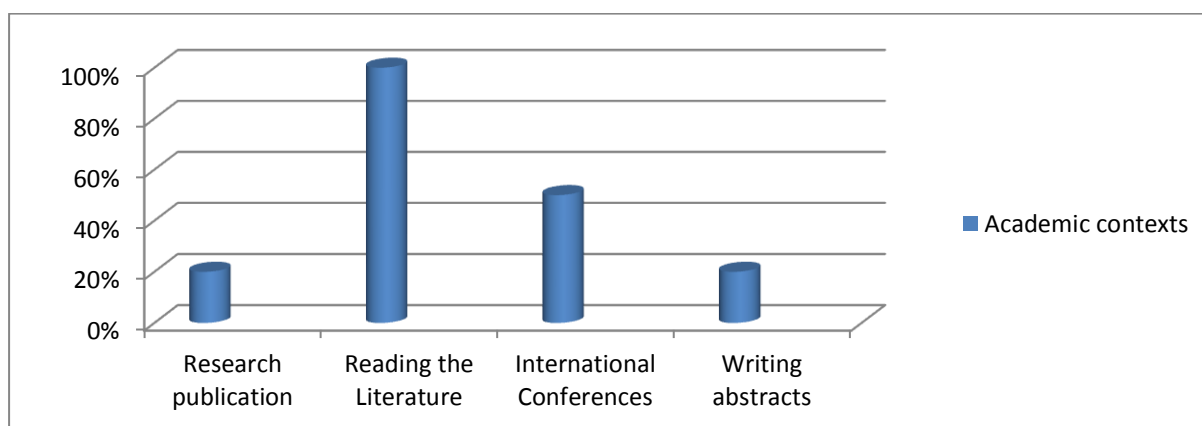


Figure 3.26 Academic Contexts where English is needed.

Question 12: The Impact of Vocabulary knowledge on reading comprehension

All the respondents emphasize the necessity of encouraging vocabulary learning. The majority (8) reported that understanding key words in any document related to Pharmacy helps in promoting an understanding of any reading material. In addition, three teachers added that in order for students to stay up-to-date with the latest research on the pharmaceutical industry, they should learn about and understand the different findings recently added to the field.

Question 13: The Use of a Latin-Greek Approach to Vocabulary Instruction

While the minority of subject specialists (three of them) find it unimportant to refer to Latin and Greek to teach vocabulary, the rest (eight teachers) pointed out the interest in this approach, saying that knowledge in this area would be helpful for students to be able to understand and guess the meaning of scientific terms.

Questions 14 and 15: Learning strategies and Methods to teach the required Skills for a communicative Purpose

All the respondents urge students to spend more time in learning English. Six respondents suggested online materials that will help students improve their level. The majority (8) reported that English must be included from the first to the last year of the program of Pharmacy Studies. They also pointed out the importance of teaching

students techniques that would help them read and understand texts well. Five teachers recommended text variation so as to get students acquainted with English texts related to the modules they study. Engaging students in communication tasks, like group work, was a technique suggested by eight teachers in order to enhance the development of students' communication skills.

3.4.2 Interpretation

The first part of the interview reveals the ten subject specialists' experience of teaching and English knowledge background. Among the participants, seven teachers hold a DEMS degree, including four professors. The rest of them (3), hold a Doctorate degree in Medical Studies. Their proficiency level in English varies from pre- to upper-intermediate. Considering the fact that most of them have at least 10 years of teaching experience, they are fully aware of the role of the English language in the career path of a medical student.

As far as subject specialists' attitudes and perceptions are concerned, the second part of the interview results reveals the importance of mastering the English Language in order to work in the field of Pharmacy. Although all the teachers are in charge of different modules, the language represents a common factor to the various subject areas, and which contributes to the learner's development in the field of Pharmacy. Eight teachers added that it should be included at all levels of the program. On the one hand, students most need to develop their reading skills to be able to read and understand the latest information relevant to Medical Studies which is available in English. In the same vein, subject specialists emphasized the importance of vocabulary acquisition to support comprehension of prerequisite reading material. On the other hand, the informants recommended that students need to improve their speaking skills to improve their communicative competence.

Regarding the means to attain effective communication, which constitutes the third part of the interview, the teachers focus on communicative activities whereby all the language skills are integrated, with special focus on reading and speaking. Subject

specialists suggested group work, where communication takes place, and contextual learning, that is, creating situations to facilitate the acquisition of new terms and practice language skills. Moreover, the respondents approved the idea that referring to the origin of words (Latin and Greek) would help students in reaching a full understanding of scientific terms. They also recommended a variety of medical texts to help students broaden their horizons and increase interest in reading.

3.5 English Teacher Interview

There is only one English teacher in the Department of Pharmacy who is in charge of the module included in the curriculum of the Pharmacy program. The teacher holds a license degree in English Studies and has a 5 years' experience teaching at university. The interview aims at revealing students' lacks and wants, since the English teacher can provide data about their areas for development in English, as well as their preferences concerning language tasks. Furthermore, the interview seeks to investigate the current teaching procedure and content in the Department.

3.5.1 Results

Question 01: First and Second year Students' Lacks

The teacher reported that groups are formed with students of mixed-ability, all with different language capacities. According to his point of view, most first year students have an average level in reading comprehension, and writing skills are weak. As far as speaking skills are concerned, a minority of them can express themselves easily, regardless of syntactic and lexical errors. Second year students' reading comprehension level is better than that of first year students. The teacher added that there is a minority (5-6 students) who have a good command of English and perform well in text comprehension. Only a minority can write meaningful sentences and form coherent paragraphs.

Question 02: Students' Preferences.

The teacher clarified the kind of activities students are interested in. They most like filling-the-gaps activities, matching scientific terms with their definitions, and participating in oral conversations to improve their oral skills. He added they also like to improve their listening skills, but, due to the lack of equipment, listening activities cannot be practiced.

Questions 03 to 08: Teaching Content and Procedure

- Question 03: the Objectives intended to be achieved.

With regards to the teaching objectives, the teacher targets the speaking skills and intends to develop the students' writing ability.

- Question 04: Adequacy of Syllabus to Students' Level.

According to the language teacher, there is not any detailed syllabus for the English course for Pharmacy students. The department was provided with guidelines on what to teach first and second year students (figure 3.4). He stated that the syllabus is not appropriate to the students' level and area of interest. He reported that it should be duly adjusted to the students' level and to the requirements of the pharmaceutical domain.

- Questions 05 and 06: The Instructional Material used and Method / Techniques followed in Teaching English.

The teacher replied that he follows the competency-based approach in delivering his lessons to Pharmacy students, trying to provide students with activities that trigger their creativity. He also pointed out that there is no syllabus provided by the Department. All the teaching material he uses is basically taken from various online documents related to Medical Sciences, mainly Wikipedia.

- Questions 07 and 08: the Role of medical Terminology and the Latin-Greek Approach in EFL Teaching.

The teacher highlighted the importance of teaching medical terminology to students of Pharmacy. He added that it is necessary to make students develop their capacity in acquiring medical terms since this plays a major role in reading comprehension and oral/ written production. The teacher found the idea of using word origins, both Latin and Greek, interesting and helpful for students to acquire medical terms.

3.5.2 Interpretation

The data obtained from the teacher's interview show that students have difficulty in reading comprehension and do not have good oral/aural skills or perform well in written production. This fact urges the need to improve the four skills, with special focus on reading and speaking. On this basis there should be skills-based activities that will not only enhance reading and speaking skills but also serve as a pedagogical tool meant to increase communication skills. These abilities need to be promoted through activities that students prefer to practice and that are necessary to their domain, like gap-filling and matching activities. Finally, the teacher reported that he follows the competency-based approach to teaching the language together with using online reading materials retrieved mainly from Wikipedia. He also emphasized the importance of terminology and the need for students to build their medical vocabulary. He agreed upon the fact that a focus on the Latin/Greek origins of medical vocabulary can be interesting and beneficial.

3.6 Classroom Observation

The objectives behind conducting classroom observation are to obtain reliable data about existing teaching procedure and content delivered to Pharmacy students, and to analyze the interactions carefully. As a research tool in this study, it also serves to portray the students' linguistic background - shedding light on language area(s) in

which students are lacking. The observation process involves a description of the educational climate for learning, the lesson structure and content, the types of materials and activities, the teacher's and students' use of language and student interactions.

3.6.1 Results and Interpretation

Educational Climate for Learning

Pharmacy students always have the English class in an auditorium where all groups of first or second year have their lectures. The teacher usually gives his lecture in less than one hour. Before students enter the English class, they seem hesitant. While some of them prefer not to attend, others are interested and aspire to learn the English language, which they regard as essential to their future career.

When the teacher is delivering the lesson, he mainly works with the students seating in the front seats. The classroom atmosphere is not highly participative since very few students respond to the teacher's questions. It is observed that the majority of students do not participate because the teacher does not always offer them the opportunity to do so.

Sometimes, the teacher invites students' response with a teacher-led question-and-answer sequence, but he does not solicit students' feedback to each other's responses. Therefore, students are not highly motivated to get involved in the classroom environment.

Lesson Structure and Content:

The lesson began with the teacher presenting an article and displaying it through the data projector. The teaching content is always chosen by the English teacher, either a reading material taken from the Wikipedia website or a medical sciences document written in English.

At the beginning of the session, the lesson's objectives and outline are not stated clearly, so students are not prepared for the content to be covered. The teacher uses classroom media moderately to attract students' attention. He explains the topic in general and moves directly to the practice phase and does not relate the current session to the previous ones.

Teaching Materials and Activities

There is no official textbook teaching English for pharmaceutical purposes. Also, the Department was not provided with any teaching material from the Ministry of Education. Therefore, it's up to the teacher to select the teaching material. The teacher used Wikipedia texts and dealt with the following topics: Herbal Medicine, Pharmacology, Antibiotic and Apnea in each session respectively. After reading the text the following activities are suggested: definition of new terms, grammar activities, and, sometimes (in two sessions), sentence construction.

Teacher's and Students' Use of Language

The teacher uses simple words in English and sometimes uses French to clarify some medical terms. He also resorts to translating the words into Arabic to ensure that students got the meaning of a given notion where students do not use English appropriately. While some of them (6 to 9) can express themselves easily using plain English, the rest of the students take notes in Arabic or French and make syntactic or lexical mistakes when speaking. Consequently, some of them participate (10 to 15), but others, around 15 to 20 abstain.

Students' Interaction

It is observed that the English class is characterized with a low student-student interaction. Students do not communicate well with one another as they are not offered many opportunities to work in pairs or exchange information in groups. Concerning teacher-student interaction, it appears that the classes are more lecture-focused. The teaching method does not appeal to a high student-teacher interaction as the teacher

does not welcome the discussion of content at any time and may sometimes answer his own questions quickly, resulting in a lack of effective construction of student knowledge.

3.7 Summary and Discussion of the Main Results

The data collected from students' and pharmacists' questionnaires, and the English teacher and subject specialists' interviews, was to a great extent helpful to the researcher and useful for cross-checking data. It highlighted the importance of English, identifying the students' needs for their academic and professional careers. The aim was to explore students' areas for development, to provide suggestions for strengthening their language abilities, also to determine the language components and skills they most need to attain communicative competence in academic and professional settings.

Through analyzing the target needs in terms of necessities, lacks and wants, the researcher is addressing the first hypothesis which deals with the language skills and components that pharmacy students most need to develop. Concerning the necessities, it is confirmed that undergraduate students show a high interest in the English language and are aware of its importance with regards to their studies (as shown in questions 5 and 6), but not to a great extent as post-graduate students, subject specialists (questions 10, 11) and pharmacists (question 4). It was indicated that Specific English is important for Pharmacy Studies, but, as stated by three postgraduates (Q 6), General English must not be neglected. Teachers, professionals and post-graduate students highlighted the utility of the language in the pharmaceutical domain; and the important role of speaking and communication in both academic and professional contexts, stating international conferences and the literature as examples of academic contexts, in addition to professional settings such as pharmaceutical laboratories and research centers. It was stated by subject specialists and pharmacists, that it is necessary for students as well as workers to exploit English texts which involve the latest literature on pharmaceutical topics (Q6 in the pharmacists'

questionnaire, Qs 7,8,9 of the post-graduate's and Q7,8,9 in the subject specialists' questionnaires), therefore, promoting reading comprehension.

Regarding the students' lacks, students usually do not perform well in reading comprehension and writing, as stated by the English teacher (Q1). The majority of undergraduate students mostly evaluate their level as low in reading and speaking (Q 11 in the students' questionnaire). Concerning medical terminology, most students (Q13 in the post-graduate students' questionnaire and Q12 in the undergraduate students' questionnaire) claimed the difficulty of medical terminology, and find vocabulary an obstacle to good communication, alongside pronunciation (Q 18). Besides the importance of vocabulary to communication, having a good command of vocabulary, as mentioned by subject specialists, is considered a cornerstone to reading comprehension. Considering the amount of time devoted to the English language and students' attitudes and behavior in the English class (Qs 15, 16, 17, classroom observation), the atmosphere is not highly motivating and does not appeal to students' engagement in the classroom.

With regards to the students' wants, this mainly focuses on the aspiration to improve reading comprehension and speaking skills. This view was maintained by Subject Specialists (Qs 9, 10, 11) and pharmacists (Qs 4, 7), who reported that these skills should be developed in line with the utility and importance of the language in the different academic and professional situations. In addition, the main objective of learning the language is to communicate well (Q21 in the undergraduate students' questionnaire). The students also stated their preferences in language activities, such as filling-the-gaps and reading tasks, which promote reading comprehension, speaking skills and vocabulary.

After analyzing and interpreting data, the target needs analysis can be summarized as follows:

- **Necessities:** the need to learn the English language as it is necessary in academic and professional contexts, the importance of Specific English, that is,

medical English as well as General English, the necessity to communicate in English in academic and professional situations, and development of reading skills to exploit medical texts.

- Lacks: low performance in reading and writing, difficulty in mastering the speaking skills, low mastery of English terminology which makes reading comprehension and communication difficult, the learning atmosphere is not highly engaging.
- Wants: improving reading comprehension and speaking skills along with communication through activities such as reading- and speaking-based tasks, in addition to filling-the-gaps with the appropriate vocabulary.

Therefore, the first research hypothesis, pertaining to the importance developing students' reading and speaking skills and promoting their, understanding of pharmaceutical terminology, is confirmed.

As far as the learning needs are concerned, they represent the route by which to reach communication. As students demonstrated the need to promote their speaking skills, accompanied by listening skills (subject specialists Q9), communicative tasks as reported by post-graduate students (Q16) will best help them attain communicative competence. Besides, subject specialists (Q 15) highlighted the role of working collaboratively in groups to foster learning, which is the strategy that is missing in the English class observed by the researcher. According to subject specialists, all skills to be acquired are important; however, special focus should be put on reading activities and communication tasks to improve students' reading abilities and communicative skills. Furthermore, both subject specialists (Qs 08, 14) and pharmacists (Q5) recommended intensive reading practices for Pharmacy students to ameliorate their reading abilities and acquire information relevant to their field. Students also demonstrated difficulty in understanding medical terms, so subject specialists (Q13) and the English teacher (Q8) agreed on the idea of implementing a lexis-based approach to vocabulary instruction. Also it is recommended to run the English

language course throughout the duration of the 6 years of Pharmacy studies, together with having a teaching support (syllabus). Text variation in teaching has also been mentioned by subject specialists (Q14 and 15). It is concluded from the participants' answers that the syllabus should deal with immediate and delayed needs, i.e. what students need in their academic career as emphasized by postgraduate students (Q5 and 6) and subject specialists (Q10 and 11) as well as in their professional life, as indicated by pharmacists (Q4),

To conclude, the learning needs can be summarized as follows: implementing communicative tasks together with intensive reading practices; implementing a lexis-based approach to teaching vocabulary; extending the English course throughout the six years of the course and providing the teaching support; text variation; and dealing with academic and professional needs. Thus, the results confirm the second hypothesis, which states, "Involving students in communicative tasks would best help them expand their linguistic knowledge and foster their language skills to achieve a communicative purpose".

To sum up, the needs analysis' results show the importance of learning English for Pharmacy students and demonstrates the students' needs in academic and work situations. Following Hutchinson and Waters' model of needs analysis, target and learning needs have been stated, indicating that students need to be accustomed to situations where English is used. They should practice the language skills especially reading and speaking, and promote vocabulary comprehension, which can be achieved through communicative tasks that will also promote the students' communicative abilities. Consequently, the data obtained from the research instruments urge the need to design a multi-focus syllabus.

The next step is the design of the syllabus which allows the integration of the required skills and language components, and offers a wide array of teaching techniques. Afterwards, the syllabus will be implemented through the action research, so as to deal with the third and fourth hypotheses.

3.8 Conclusion

In this chapter, the investigator tried to analyze and interpret the data obtained from the students' and pharmacists' questionnaires, language teacher and subject specialists' interviews and classroom observation. The data were analyzed qualitatively and quantitatively and the main findings were discussed compared with the first and second research hypotheses. It has been demonstrated that all informants are aware of the pivotal role that the English language plays in the academic and professional career of both the Pharmacy student and the pharmacist, and that language knowledge and skills should be widely promoted. The identification and analysis of students' needs represent an important parameter upon which an ESP course should be built. Accordingly, the next chapter will deal with the multi-focus syllabus design which will be implemented in the fifth chapter, describing the action research.

CHAPTER FOUR
COURSE DESIGN

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4.1 Introduction

Teaching English to medical students has become an academic requirement. Due to the worldwide status of English students as well as professionals need to develop their mastery of the language and their communication skills. The majority of medical information updates are produced in English and speakers at international medical conferences organized all over the world use this language to deliver important medical knowledge. Therefore, it is of utmost importance to improve students' comprehension and communication skills.

As a result of the needs analysis conducted among Pharmacy students, addressing students' language needs and the requirements of the pharmaceutical domain, the researcher opted for an investigation of the results by designing a multi-focus syllabus for first year students. This chapter is concerned with the second step of the action research model previously mentioned (see figure 2.9), that is, the design of the syllabus to be implemented. It is initiated with the representation of the findings of the needs profile for Pharmacy students followed by the course aims and objectives. Then, the researcher presents the outline of the course, organized into units and lessons including the four skills, grammar and vocabulary. In addition, the researcher describes the assignments and exercises given to reinforce the concepts and skills introduced in each lesson. Finally, a general description of the second year syllabus is introduced.

4.2 Developing an English course for Medical Studies

For the purpose of developing the appropriate teaching material for Pharmacy students who are involved in Medical Studies, the essential steps in making an overall design for an ESP course should be considered. According to Graves (2000), a systematic curriculum consists of:

1. Conducting students' needs assessment, followed by analysis;
2. Determining the goals and objectives of the course;
3. Conceptualizing the content;
4. Selecting and developing materials and activities;
5. Organizing the content and activities;
6. Evaluating.

This can be illustrated through the figure below:

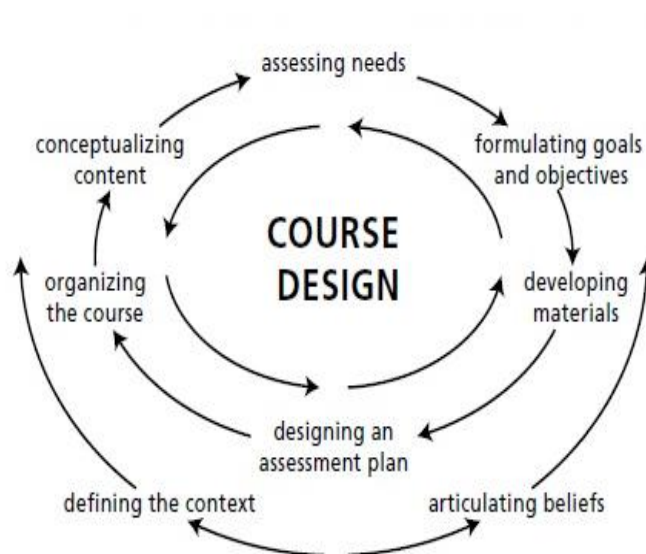


Figure 4.1 Graves' model of curriculum development, from Graves 2000

This chapter is mainly concerned with syllabus design, as a subset of curriculum, i.e., it represents the content to be taught to Pharmacy students. Besides, it also deals with teaching objectives and methodology as part from the overall curriculum. Evaluation will be tackled in the next chapter.

4.3 Pharmacy Students' Needs Profile

After collecting and analyzing all the information from the students, the subject area specialists, English teacher and pharmacists working in different fields, the researcher obtained the final results with regard to Pharmacy students' language needs. The overall findings focus on communication in different academic as well as professional contexts, including reading the literature, attending and participating in conferences and holding conversations with English speaking people. It has been concluded that it is important to focus on reading comprehension, to help students develop their reading skills and promote their understanding of pharmaceutical terminology. Vocabulary acquisition, also, is a prerequisite to attain competence in this respect.

Besides the results of the needs analysis, many studies were undertaken in Pharmacy education, evoking the concept of experiential learning that connects Pharmacy to patient care activities. This will help students develop their clinical skills, enhance their critical thinking skills (Seybert and Kane Gill, 2011), and optimize their health care skills and communication abilities (Fejzic and Barker, 2015). The following table summarizes the results of needs analysis and common core needs that the syllabus will be based on. It consists of learning situations that illustrate the target situations Pharmacy students will be confronted with. Moreover, it also highlights the linguistic knowledge and skills needed to meet the educational need.

Target situations (target needs)	Language knowledge and skills required (learning needs)	Suggested in-class activities
Reading the literature	<ul style="list-style-type: none"> - Reading activities (reading for gist, details) - Vocabulary acquisition activities - Inferring meaning from text - Guessing word meaning through Latin and Greek - Using visual aids 	<ul style="list-style-type: none"> - Reading texts (medical texts according to the students' level)
Attending and participating in international conferences	<ul style="list-style-type: none"> - Communication skills - Vocabulary - Accuracy (grammar practice) - speaking and listening skills 	<ul style="list-style-type: none"> - Communicative tasks - Collaborative work - Presentations
Holding conversations with English speaking people (they may or may not be medical professionals)	<ul style="list-style-type: none"> - Speaking and listening-based activities - Practice of scenarios in a simulated environment - Appropriate intonation, pitch of voice 	<ul style="list-style-type: none"> - Role-play (dispensing medical product) - Simulation tasks for 2nd year students (pharmaceutical care services to patients) - Storytelling

Table 4.1 Representation of target and learning needs in Pharmacy context

(Adapted from Benyelles, 2009)

The illustration of target needs in the table above paved the way to identify the goals and objectives of the current syllabus in addition to constructing the content accordingly. The present chapter also deals with the teaching materials, pedagogical tools, teaching method and language tasks and activities. Finally, the process concludes with the evaluation and students' progress assessment, which will be dealt with in the next chapter.

4.4 Course Aim and Objectives

The ultimate aim of the course is to equip the students with the necessary skills and linguistic knowledge they need in order to be able to communicate effectively in academic and professional settings. Needs analysis results stipulate that students need to promote their reading and speaking skills as well as to develop vocabulary learning. Communication in English was emphasized, indicating that communicative tasks will be a vehicle to meet these ends. The EMP course was designed accordingly, to achieve the following objectives:

- To enhance students' language skills and communication abilities.
- To promote language skills, particularly reading and speaking skills, as well as vocabulary knowledge.
- To develop students' ability to infer meaning from text in order to reach an effective reading comprehension.
- To familiarize students with basic terminology that takes its roots/prefixes/suffixes from Latin and Greek.
- To reinforce what the students have already learnt as medical knowledge.
- To enable students recognize the use of grammatical structures from context.
- To help learners acquire different medical notions through diversifying situations and topics

4.5 Presentation of the Course

After identifying Pharmacy students' needs and setting the course objectives, the researcher attempted to define the content of the course, and opted for a multi-focus syllabus, which includes a variety of specific elements: structures, functions, notions, situations and topics (Orwig, 1999), that will serve Pharmacy students' needs. Similarly, Hedge (2000) coined the term *multi-dimensional syllabus* to describe the integration of functions, lexis, structures and all four skills. The aim is not to focus solely on linguistic elements but, rather, to integrate functions, notions and situations needed to achieve the goal of communication. Therefore, the researcher used a variety of tasks and activities that allows the integration of the four skills and highlights grammar constructs and lexicon required for the medical field.

However, it is quite a challenge to select, sequence and implement tasks and activities in ways that combine focus on meaning with focus on form. Therefore, the researcher designed activities that Pharmacy students are likely to encounter in their academic and professional careers, so they are more likely to participate in class. These activities will prepare them not only to read about and understand the updated information in their field but also to reach effective communication.

As the multi-focus syllabus includes a variety of language elements, it should be noted that there is a list of structures, vocabulary words, communication functions and topics to be learned in order to meet Pharmacy students' target and learning needs. These elements will be combined into units to develop the language learning program for first year and, subsequently, second year students.

4.6 Organization of the Course

The course is designed for first and second year Pharmacy students. It is composed of four units, two units for each level. As far as the first year level is concerned, it represents the basis for learning. Therefore, the researcher provided a detailed description of the syllabus containing two units in which essential language

elements are provided. Afterwards, an overview of the second year syllabus is provided. Each unit involves sections with special focus on reading, speaking and vocabulary, as follows.

Vocabulary comprehension and acquisition: In this section, students are not only presented with pharmacy and health-related vocabulary but also with everyday common words so as to improve their communication at the social and professional levels. Also, they are exposed to abbreviations related to medical documentation. In addition, the researcher incorporated some Latin and Greek input, to improve students' vocabulary comprehension and acquisition, with the aim of familiarizing students with medical terminology and developing their ability to infer meaning from context.

Grammar structures: students are taught grammar structures implicitly through guessing the grammar rule and its meaning from context; for instance, sentences with the new grammar structures are written in bold or italics in the text for the purpose of analysis.

A range of exercises are conceived to focus on lexis and grammar , such as, gap-filling, contextual guessing, finding synonyms/ correspondent terms, inferring Latin/Greek meaning , spotting mistakes, true/ false and multiple choice questions.

Reading comprehension: this section focuses on the students' ability to read, understand and retain information and language found in the written material. The student will practice his/her reading comprehension through pre-, while- and post-reading exercises. Passages and texts aspire towards authenticity as the researcher used medical books, articles and text excerpts from the internet, and employed text adaptation when necessary. The ultimate aim in the reading phase is to stimulate interaction and communication among the learners.

Various strategies and reading exercises are used throughout the process. Students will start relating the title or illustration to the text, and then refer to previous knowledge along with skimming and scanning the text. The second step consists of contextual guessing, looking up words in the dictionary, focusing on structures so as to extract

grammar rules and taking notes on important points. The last stage includes the kinds of exercises that involve inductive reasoning and conclusion making, such as predicting what might come next, and expanding on the given topic.

Speaking skills: with regards to this productive skill, students will learn and enhance their speaking abilities and put into practice the acquired terms and structures

Listening comprehension: in this section, students will listen to audio files or watch videos for the purpose of correcting pronunciation and developing communication skills such as negotiation and interruption techniques. Students will then demonstrate their understanding through multiple choice questions and fill-in-the-blank exercises.

Writing exercises: in the writing phase, students will put into practice grammar structures and vocabulary terms that they have already learnt.

Communicative tasks: vocabulary acquisition, grammar practice, receptive and productive skills are combined together to fit into a communicative and interactive task. The tasks will involve healthcare-related contexts to expose students to authentic situations, like role-plays and simulations. The construction of narratives will also be practiced in the course,

4.7 First Year Syllabus Content

Many syllabus designers organize the course content in terms of language units. Similarly, the researcher adopted the same approach for the present work. First year syllabus content includes two units, as proportionate to the allocated time for the English class (see section 2.2.3.3). Each unit revolves around general and specific health-related topics that can be of interest and utility to the students. Each unit is broken down into three sequenced lessons that include texts and exercises which correlate language components and skills with medical content.

4.7.1 Unit One: Healthy Lifestyle

The aim of this unit is to raise students' awareness about the importance of a healthy lifestyle so as to keep fit and prevent illness. It introduces students to health-related vocabulary and invites them to offer and receive advice on good living habits.

UNIT 1	Lessons	Text/Topic	Functions/ Lexis /Grammar	Skills and abilities
Healthy Lifestyle	01	Get fit, stay healthy!	<ul style="list-style-type: none"> • Health-related terms • Imperative 	<ul style="list-style-type: none"> • Reading for gist and specific information • Practicing fluency in speaking by having a small talk
	02	Exploring sugars in food	<ul style="list-style-type: none"> • Sugar as a chemical substance • That - clause • Subjunctive (1) • Greek root « ose » 	<ul style="list-style-type: none"> • Giving advice, decision making and negotiating • Ability to turn interrogative form to affirmative
	03	Caffeine	<ul style="list-style-type: none"> • Latin suffix « ine » • « can, may » :expressing probability and possibility 	<ul style="list-style-type: none"> • Practicing the right pronunciation • Listening for gist and details • Asking for and giving information

4.7.1.1 Lesson 01

Objective: By the end of this lesson, students will realize the importance of exercising and keeping fit. They will also be able to use the imperative in its context adequately.

- **Warming up**
 - What is the purpose of your enrollment in Pharmacy studies?
 - Is “taking medicines” the only way to be cured?

- Is there a way to prevent taking these chemical substances?
- **Pre-reading**
- What does the word “healthy” refer to?
- What does the picture represent?



- What is the text format?

GET FIT, STAY HEALTHY!

Being fit means you're in good shape, you have energy, you're active, and you don't get tired easily.

Most people who are fit also feel pretty good about themselves.

Any type of regular, physical activity can improve your fitness and your health—even walking, climbing up a flight of stairs, or mowing the lawn.

The most important thing is that you Keep moving!

What are the benefits of being active?

There are a lot of benefits to being physically active. It can help

- Keep you at a **healthy weight**.

This doesn't necessarily mean being thin.

Everybody's ideal weight is different—it depends on your height and body size.

- **Prevent heart disease.** Heart disease is the leading cause of death

in the United States; research has shown that the risk factors for heart disease start during child-hood. A lack of physical activity is one of the major risk factors of heart disease.

- Strengthen your bones.

Regular exercise keeps bones healthy and can help prevent a bone disease called osteoporosis.

This disease is common in older people and causes bones to break easily.

- **Reduce stress.** We all have stress, but learning to cope with it is an important way to stay healthy. Many things can cause stress

like problems with parents or friends or the pressures of school.

Exercise can help you relax and helps your body handle stress.

What can I do to become more fit?

Just *do it!* Make the commitment and stick to it.

Exercise should be a regular part of your day, like brushing your teeth,

eating, and sleeping. It can be in gym class, joining a sports team, or working out on your own.

- *Stay positive* and have fun. A good mental attitude is important. Find an activity that you think is fun. You are more likely to keep with it if you choose something you like. A lot of people find it's more fun to exercise with some-one else, so see if you can find a friend or family member to be active with you.
- *Take it one step at a time.* Small changes can add up to better fitness. For example, walk or ride your bike to school or to a friend's house instead of getting a ride. Get on or off the bus several blocks away and walk the rest of the way. Use the stairs instead of taking the elevator or escalator.
- *Get your heart pumping.* Whatever you choose, make sure it includes aerobic activity that makes you breathe harder and increases your heart rate. This is the best type of exercise because it increases your fitness level and makes your heart and lungs work better. It also burns off body fat. Examples of aerobic activities
-

- are basketball, running, or swimming.
- *Don't forget* to warm up with some easy exercises or mild stretching before you do any physical activity. This warms your muscles up and may help protect against injury. In addition to exercise, making just a few other changes in your life can help keep you be more healthy, such as: watching less TV, eating healthy meals, and avoiding cigarettes.

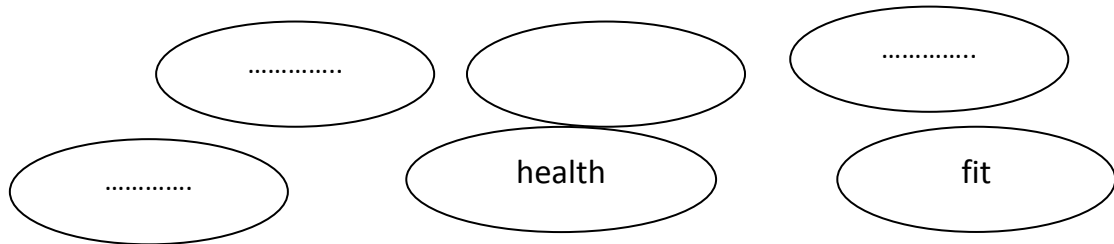
Adapted from "The American Academy of Pediatrics dedicated to the health, safety, and well-being of infants, children, adolescents, and young adults"

• **While-reading**

1) State other factors that may cause stress.

1.;
2.;
3.;
4.

2) What do words in bold type indicate? Complete the following diagram with appropriate words/ information from the text



3) Match the following verbs with the appropriate picture.

Physical activity and exercise

climbing the stairs

vacuuming

mowing the lawn

cleaning

walking

raking the leaves

jogging

biking

hiking

snorkelling



Have a look at words/ phrases written in *italics*. What do you notice?

- Try to sort out from the text all similar structures. What do they refer to?

➡ Language study: The Imperative

- We use the infinitive to form the imperative.

We can use the imperative to give *a direct order*.

1. Take that chewing gum out of your mouth.
2. Stand up straight.
3. Give me the details.

We can use the imperative to give *instructions*.

1. Open your book.
2. Take two tablets every evening.
3. Take a left and then a right.

We can use the imperative to *make an invitation*.

1. Come in and sit down. Make yourself at home.
2. Please start without me. I'll be there shortly.
3. Have a piece of this cake. It's delicious.

We can use the imperative on *signs and notices*.

1. Push.
2. Do not use.

3. Insert one euro.

We can use the imperative to give *friendly informal advice*.

1. Speak to him. Tell him how you feel.
2. Have a quiet word with her about it.
3. Don't go. Stay at home and rest up. Get some sleep and recover.

We can make the imperative 'more polite' by adding 'do'.

- Do be quiet.
- Do come.
- Do sit down.

In the negative form you add 'do not' or 'don't'

- Do not disturb.
- Don't smoke.

Practice:

- a) Classify the imperative structures found in the text according to the purpose
 - Giving advice:,,
 - Giving instructions:,,
 - Giving orders:,,
- b) Turn these sentences into imperative structures when possible:
 - You should get up early.
 - You can't drink a lot of juice.
 - You should write down everything you eat for a day.

- You can't change what you are not aware of or don't acknowledge.
- You need to check your mood and energy.
- Make the phone call today to schedule that appointment.
- You can't burn calories without exercising.

- **Post-Reading**

- 1) With your partner, convert the last underlined sentence from the text into imperative sentences, then write down and perform a dialogue.

"Making just a few other changes in your life can help keep you healthy, such as: watching less TV, eating healthy meals, and avoiding cigarettes."

- **Language task**

- 1) Listen to the audio recording and circle the "bad habits" the speaker mentions.
jogging- eating fast food- sleeping at a late hour- consuming sweets moderately-
- 2) In a group of four, ask your classmates about the everyday habits they recognize as unhealthy and make notes about what they tell you. Exchange the lists with the other groups.
- 3) Each group provides solutions for these unhealthy habits. One student is chosen to talk on behalf of the group.

4.7.1.2 Lesson 02

Objective: By the end of this lesson, students will be familiar with types of sugar and how they affect the human body. They will also be able to use the subjunctive with its different functions.

- **Warming up**

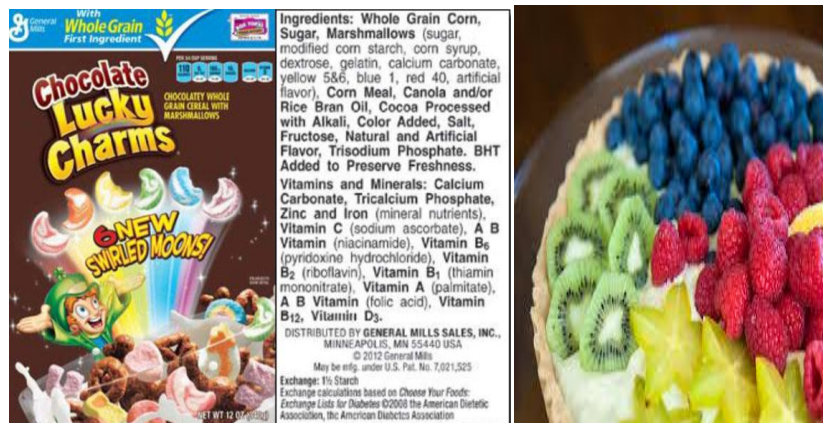
- Can you tell me how much sugar you consume in your breakfast?
- What kind of sugars we do find in food?
- Do you think reducing free sugars makes you get healthier?

- **Pre-reading activity**

- Look at the text and try to guess the general idea
- What is the link between the text and the pictures?
- Brainstorm words related to “sugar”
-

SUGAR- sweets- juice- cookies- honey- jam-
 cakes- dates- fruits- pastry- dried fruits- ice cream-
 chocolate- diabetes- insulin -

- How many paragraphs/ ideas are there in the text?



Text

Many foods and drinks that contain free sugars can be high in energy (calories) and may have few other nutrients. Having these foods or drinks too often can mean you consume more calories than you need, which can lead to weight gain and obesity. The amount and frequency of foods and drinks with free sugars we consume can also increase our risk of dental decay.

Free sugars

Free sugars are sugars added to foods and drinks by manufacturers, cooks or consumers, and also sugars found naturally in honey, syrups and fruit juice.

Sugars found for example in fruits and vegetables (fresh, frozen or dried) and in milk and products such a plain yogurt and cheese are not classed as free sugars. Free sugars are found in foods such as sweets, cakes, biscuits, chocolate, and some fizzy drinks and juice drinks. These are the sugary foods we should cut down on.

Total sugars

The ‘total sugars’ value given on food labels includes all sugars regardless of the source. In other words, it includes those naturally present and those added to foods or drinks.

In some foods and drinks, all of the sugars are free sugars. Examples include:

- *Sugars-sweetened beverages, fruit-flavored sweets and fruit juice*: all sugars in these products are free sugars

Some foods provide a mix of free sugars and naturally present sugars as they contain milk and/or fresh or dried fruit but are also sweetened with additional sugar

- *Fruit yogurt* : Sugars present naturally in milk (lactose) (not free sugars) or fruit (not free sugars) but can also have sugars added to sweeten (free sugars)

Doctors **recommend that** free sugars – sugars added to food or drinks, and sugars found naturally in honey, syrups, and unsweetened fruit and vegetable juices, smoothies and purées – **shouldn't** make up more than 5% of the energy (calories) you get from food and drink each day. This means:

- Adults **should have** no more than 30g of free sugars a day, (roughly equivalent to seven sugar cubes).
- Children aged 7 to 10 **should have** no more than 24g of free sugars a day (six sugar cubes).
- Children aged 4 to 6 **should have** no more than 19g of free sugars a day (five sugar cubes).
- There is no guideline limit for children under the age of 4, but **pediatricians recommend they avoid** sugar-sweetened drinks and food with sugar added to it.

For example, a can of cola can have as much as nine cubes of sugar – more than the recommended daily limit for adults.

How can I tell how much free sugars are in the food?

Don't forget, the sugars we need to reduce in our diets are free sugars-those added to foods and drinks and those found in fruit juice, honey and syrups. Those naturally present in the structure of fruits and vegetables and in milk are not included in the definition of free sugars.

It can be difficult to tell how much free sugars are in particular products but the ingredients list is a good place to start. Sugars that are added to products must be included in the ingredients list. Free sugars may appear in the ingredients list as ‘sugar’ but other words and terms to look for include:

Cane sugar, honey, brown sugar, dextrose, fructose, sucrose, glucose, maltose,

fruit juice concentrate, corn syrup, molasses, carbohydrate, nectars and molasses**So... how can I reduce free sugars in my diet?**

Retrieved and adapted from www.nutrition.org.uk and www.nhs.uk

- **While- reading**

- 1) Scan the paragraphs and state the main idea for each in one sentence.
 - Following the question written in bold, turn the main ideas into an interrogative form
 - Suggest a title for the text
- 2) Classify the following foods according to the type of sugar they contain:
lettuce, squash, natural cheese, fruit yogurt, celery, cucumbers, eggplant, coconut oil, hazelnuts, almonds, biscuits, brown rice, oats, red lentils, tea, ginger, red wine vinegar, olive oil, apple, peach, white bread, dried raisins, dates, juice, aspartame, bananas, watermelon, milk, confectionary.

Free sugar	Natural sugar

- 3) Match each word with its definition according to its meaning in the text
 - calories an abnormal accumulation of body fat
 - obesity units of heat or energy
 - dental decay the customary amount of food and drink taken by a
 - person from day to day
 - diet tooth cavities that are promoted by sugars and acids
 - carbohydrates thick syrup obtainable as sugar cane
 - molasses a source of energy. present mainly in sugars and starches

 **Word study:** “-ose” , suffix

- A suffix, from a Greek origin, used in chemical terminology to form the names of sugars and other carbohydrates , and protein derivatives, such as: *fructose*; *glucose*; *lactose*; *protease*
- A suffix occurring in adjectives borrowed from Latin, meaning “full of”, “abounding in”, “like”: *grandiose*; *verbose*; *otiose*; *jocose*.
- Ose , variant of “ous”, such as: jealous, rigorous, dangerous.

Practice

- 1) Define the following words by dividing them into root and suffix:
fructose, pilose, verbose, lactose, ambitious, cymose, lustrous, maltose, outrageous.

 **Language study**

1) verb+ that clause

Verbs commonly followed by *that* include reporting verbs (*say, tell, admit, etc.*) and mental process verbs (*believe, think, know, hope, recommend etc.*). Examples include:

- *They say that being overweight increases your risk of health problems such as heart disease*
- *Doctors indicate that sugars found in fruits and vegetables are less likely to cause tooth decay*
- *Pediatricians say that fizzy drinks, soft drinks and juice drinks have no place in a child's daily diet.*

2) The subjunctive

The subjunctive is used to express urgency or importance. It requires use of the verb in its base form rather than its normal tense form.

It is used with the following verbs and expressions which are normally followed by a **that**-clause in which **that** is often omitted.

Verbs Followed by the Subjunctive

to advise (that)

to ask (that)

to command (that)

to demand (that)

to desire (that)

to insist (that)

to propose (that)

to recommend (that)

to request (that)

to suggest (that)

to urge (that)

Examples:

- *The National Health Service (NHS) proposes **that you eat** dried fruits as part of a meal.*
- *The doctors have urged (**that**) **he remain** in hospital for a further week.*
- *I suggest **he not go** on a diet at the moment.*

Expressions Followed by the Subjunctive

It is best (that)

It is crucial (that)

It is desirable (that)

It is essential (that)

It is imperative (that)

It is important (that)

It is recommended (that)

It is urgent (that)

It is vital (that)

It is a good idea (that)

It is a bad idea (that)

Examples

- *It is recommended **that he avoid** sugar-rich food*
- *It is important **that he check** nutrition labels to help him check food with less sugar*
- *It is a good idea **you be** there before sun set.*

The word **should** is sometimes used to express the idea of subjunctiveness. It is most common after “suggest”, “recommend” and “insist”

Examples:

- *The doctor recommended that she **should see** a specialist about the problem.*
- *I suggest that you **should limit** the amount of cheese you consume weekly.*

Practice

1) Fill in the blanks below with the correct form of the verb in parentheses

- It's important that she (remember) to take her medicine twice a day.
- I suggest that Frank (read)..... the directions carefully before assembling the bicycle. He doesn't want the wheels to fall off while he is riding down a hill.
- The nutritionist recommended that Sally (reduce) her daily fat intake.

- It is necessary that a life guard (monitor) the swimming pool while the children are taking their swimming lessons.
- I think it's an interesting fact that she (come) from Estonia.
- The sign at the pool recommended that you (swim)..... after eating a large meal.

2) Choose the most appropriate answer

- I demand that he immediately. (apologize, has apologized, should apologize)
- I suggest that she the doctor before going on a diet. (consults, should consult, will consult)
- It is necessary that everything ready by two o'clock. (is, be, will be)
- They recommend that she to a nutritionist in France. (should go, go, goes)
- The doctor insisted that she to the hospital for tests (should go, goes, go)
- She suggested that we in the lobby of the hotel at 9:00. (shall meet, should meet, will meet)

• **Post-reading**

Students read nutrition labels and food ingredients and try to sort out free sugar and discuss other ingredients with reference to chemistry.

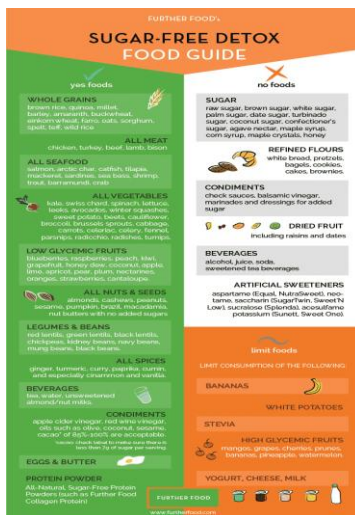
The image contains three parts related to food labeling and ingredients:

- Left:** A nutrition label for Blueberry Muffin. It shows values for Sodium, Total Carbohydrate, Fiber, and Calories per gram. The ingredients list includes whole wheat, wheat flour, salt, spices, rice flour, whey, corn starch, leavening (sodium bicarbonate, sodium aluminum phosphate, monocalcium phosphate), beet powder, paprika, calcium sulfate, non-fat milk powder, extract of paprika, dehydrated egg yolk, caramel color, and garlic powder.
- Middle:** A red box containing the ingredients list for the muffin: HIGH FRUCTOSE CORN SYRUP, CORN SYRUP, WATER, SALT, CELLULOSE GUM, CARAMEL COLOR, NATURAL AND ARTIFICIAL FLAVORS, SODIUM HEXAMETAPHOSPHATE, SORBIC ACID AND SODIUM BENZOATE (PRESERVATIVES).
- Right:** A diagram titled "PROPOSED LIST OF INGREDIENTS" showing a list of ingredients with arrows pointing to specific parts of the list. Annotations include: "Black font, upper and lower case" pointing to the ingredient list; "Grouping of sugar-based ingredients" pointing to the sugar-based items; "Bullet to separate ingredients" pointing to the bullet points; "Minimum font size required" pointing to the font size; "Food colours" pointing to "Caramel color"; "White or neutral background" pointing to the background; and "Labelled by name" pointing to the ingredient names.

McDonalds French Fries Ingredients	
United States	United Kingdom
Potatoes, Vegetable Oil (Canola Oil, Hydrogenated Soybean Oil, Natural Beef Flavor [Wheat And Milk Derivatives]*, Citric Acid [Preservative]), Dextrose, Sodium Acid Pyrophosphate (Maintain Color), Salt. Prepared In Vegetable Oil (Canola Oil, Corn Oil, Soybean Oil, Hydrogenated Soybean Oil With TBHQ And Citric Acid Added To Preserve Freshness). Dimethylpolysiloxane Added As An Antifoaming Agent.	Potatoes, Vegetable Oil (Sunflower, Rapeseed), Dextrose (only added at beginning of season). Prepared in the restaurants using a non-hydrogenated vegetable oil. Salt is added after cooking.
	FOODBABE.COM

• **Language task**

- Students are presented with the following infographic and are invited to discuss its content in small groups



- The group members try to design a weekly diet program accordingly then share it with other groups

- In pairs, students perform a short dialogue where one plays the role of a nutritionist and the other a patient, to give advice on how to cut down the amount of sugar - using the subjunctive.

4.7.1.3 Lesson 03

Objective: by the end of this lesson, students will be aware of the effects of coffee and will be able to distinguish caffeine sources (chemical and natural). They will be able to express ability and possibility through “may/ can”. Through pictures, students are invited to enlarge their cultural background, as it is a means to diversify information to meet their interests.

• **Warming up**

- Did an alarm clock wake you up this morning? Do you need it every day? Why?

- The *alarm clock wakes your brain* and forces you to get out of bed, what do you need also to keep you awake and active; What about a cup of coffee?
- What kind of coffee do you like to drink?
- **Pre-reading**
 - What comes to your mind (images, thoughts, situations) when you see these different kinds of coffee maker?



- Listen to the audio of a TV broadcast and try to guess what is the topic about

Whether it's gourmet or just a good, old-fashioned regular brew, more than 80 percent of Americans consider themselves coffee drinkers. Certainly it can't be bad for us, right? Without jumping to conclusions, Eyewitness News Healthbeat Reporter Mark Hiller looked into the possible perks of coffee.

Like many of us, Robert DePompe of Reeder's has only one thing on his mind when he wakes up in the morning. "My first cup of coffee and then that starts my day." **He can't imagine** starting his day any other way. When asked what a day would be without coffee, Mr. DePompe laughed and said "pretty hard". He credits a fresh brew with giving him energy. "Coffee helps you get through, you know. It's good for you. I think it's good for you."

But is it really? Lehigh Valley Hospital-Pocono Dr. David Testa said, "There are, you know, pros and cons that people have heard over time." The pros start with the jolt caffeine causes. It's **a brain stimulant that can help you** combat fatigue. "We know that short term caffeine improves mental alertness, mental energy, ability to focus," said Dr. Testa.

That cup of Joe is also loaded with antioxidants that Dr. Testa said is linked to warding off certain diseases. "**We may have** decreased risks to Parkinson's Disease to Alzheimer's, Dementia." **You can add** reduced risk of Type 2 Diabetes, heart and liver disease and certain cancers, too.

The downside is when, Dr. Testa said, your daily coffee habit exceeds more than a few cups or 400 milligrams of caffeine. **It can trigger** heart palpitations, increase anxiety and insomnia and cause heartburn. "More stomach upset, GI upset, reflux disease," the physician said.

Keep in mind if you're doing two or three cups of coffee a day and reaching your caffeine threshold, you might have other sources of caffeine coming into your diet that will put you over the top. That means keeping a cautious eye on things like soft drinks, tea and chocolate. "**You can look** at labels and decide that way," said Dr. Testa.

So what's the takeaway? The answer: moderation is key. Talk to your doctor if you're questioning how much coffee, or caffeine, is too much for you.

- **While-reading**

- 1) Listen and read the text (transcription) carefully to do the activities
- 2) Read the text again and give a definition for the following terms

pros and cons:

perks:

jolt:

insomnia:

caffeine:

disorder:

3) put the relevant information in the right column

Advantages	Disadvantages

4) State the different illnesses mentioned in the text, then fill in the gaps below with the right one.

- disease is characterized by progressive loss of muscle control.
- A person suffering from has memory lapses, such as forgetting familiar words.
- A sign of is when blood glucose level is higher than normal.
- is related to disorder of digestive function.
- Many people suffer from That is explained by the heart's inability to pump up an adequate supply of blood.


 **Word study: “-ine”**

- a suffix of adjectives of Greek or Latin origin, meaning “of or pertaining to,” “of the nature of,” “made of,” “like”: *crystalline, marine*
- A noun suffix, from Latin origin, used to form words for derived substances, particularly in chemical terms: amine; aniline; caffeine; quinine; quinoline, bromine, chlorine.

Practice

1) Using the suffix “-ine”, form words to the following roots

coca, tea, coffee, nicotinic acid, fluor, guano, iodes.

 **Language study: “can / may”: ability and possibility**

- *Can* is used to express ability and possibility in the present and future. The negative form is one word - cannot. The short form is can't. Examples:
 - “It’s a brain stimulant that *can help* you combat fatigue.”
 - “It *can trigger* heart palpitations,”
 - “He *can't imagine* starting his day any other way.”
- *May* is used to express something that is possible in the future. Example:
 - “We *may have* decreased risks to Parkinson's Disease to Alzheimer's, Dementia.”
- *May not* means something negative is possible
 - I’m very busy , so I *may not have* time to go with you

Practice

1) Complete the statements. Use can/ can't and these verbs: catch, go, hear, see, walk

- Please speak up. I Very well.
- I..... Lucy now. Look!
- I’ve finished, so I home
- Tim is only a baby. He yet.
- Youme! I’m too fast for you.

2) Complete the statements. Use may/ may not.

- We are very late for the plane. We miss it.
- I..... be late home this evening, so don't worry if I'm not back at the usual time.
- If we go on playing this badly, wewin the game.
- I.....catch the 9:00 train, but I'll probably get the one at 9:30.
- We.....have enough milk. Could you buy some, please?
- I'll try and get a green dress in town, but I.....be able to find one.

- **Post-reading**

- Students, in small groups, read the following handout related to the history and manufacture of coffee. They skim the passages then give the overall meaning of each.
- Students are required to work out meaning for the following words: *stimulate, dose, anxiety, stimulant, fat, restlessness, fatigue.*

- **Language task: "Tea better than coffee?"**

(script): Caffeine is sometimes called "theine" when it's in tea. Caffeine is an alkaloid.

There are numerous compounds called alkaloids, among them we have the methylxanthines, with three distinguished compounds: caffeine, theophylline, and theobromine. These compounds are present in different plant sources. Caffeine is found in coffee, tea, cola nuts, mate, and guarana. It is considered to be a stimulant of the central nervous system, cardiac muscle, and respiratory system, a diuretic, and to delays fatigue. Theophylline is present in tea. It is a cardiac stimulant, smooth muscle relaxant, diuretic and vasodilator. Finally, Theobromine is the principle alkaloid of the cocoa bean (1.5-3%), cola nuts, and tea. It is known for its diuretic properties, as a smooth muscle relaxant, a cardiac stimulant and for having vasodilator effects.

- 1) Listen to the recording and state the effects of caffeine, theophiline and theobromine. Which component has a stronger effect on the other?

- 2) In a small group, write down a list of sentences (advice) you would like to address to your partner where the context revolves around healthy lifestyle (exercising, heating habits...etc) using subjunctive, imperative and may/ can grammatical patterns.
- 3) After exchanging the lists between the groups, one student presents the work orally to his or her classmates .

4.7.2 Unit two: Human Body (I)

The aim of this unit is to introduce students to human anatomy as well as medical vocabulary related to it. This unit started with the respiratory and the digestive systems in accordance with the anatomy course of first year students.

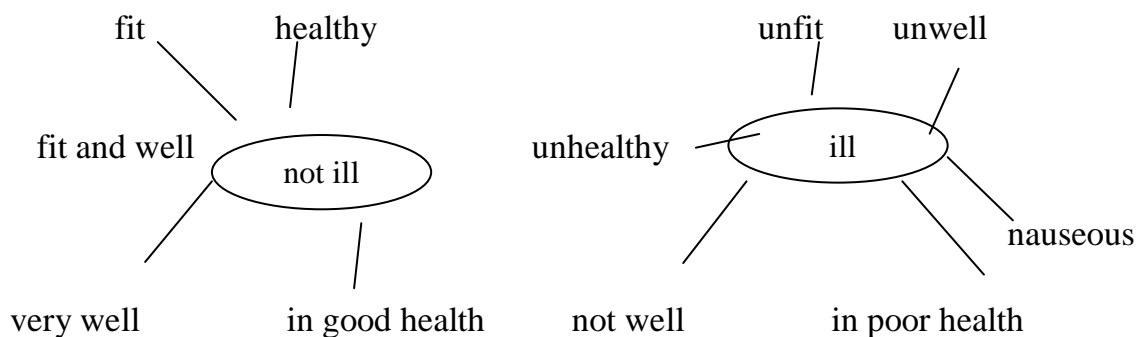
UNIT 2	Lessons	Text/Topic	Functions/ Lexis /Grammar	Skills and Abilities
Human Anatomy 1	01	Body Parts and Functions	<ul style="list-style-type: none"> • Word formation verb/noun/ function • Get pain in/have difficulty with 	<ul style="list-style-type: none"> • Ability to pronounce body parts in English correctly • Guessing and using inferences
	02	Respiratory System	<ul style="list-style-type: none"> • Vocabulary related to breathing process • Present simple • That clause with <i>which, that, who</i> 	<ul style="list-style-type: none"> • Ability to get meaning from context. • Using deductive reasoning and listening for details
	03	Digestive System	<ul style="list-style-type: none"> • Suffixes : ic/ical. Root : pepsis • Past simple tense 	<ul style="list-style-type: none"> • Introduction to storytelling • Problem solving

5.7.2.1 Lesson 01: Body parts and functions

Objective: By the end of this lesson, students will be able to identify body parts in English and determine their functions as well as to express their state of health.

- **Warming-up**

- What does the word HEALTH mean?
- What is your general health like?



- **Pre-reading**

- 1) Complete and role play the conversation

Doctor: How are you feeling today?

Patient: Not very

Doctor: How long have you been feeling

Patient: About a week.

Doctor: What is your like normally?

Patient: Very good. I'm usually quite and

Doctor: What is the problem now?

Patient: It's my stomach.

Doctor: Do you feel

Patient: Yes.

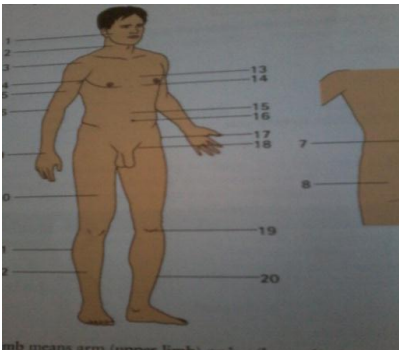
Doctor: Have you actually been ?

Patient: No.

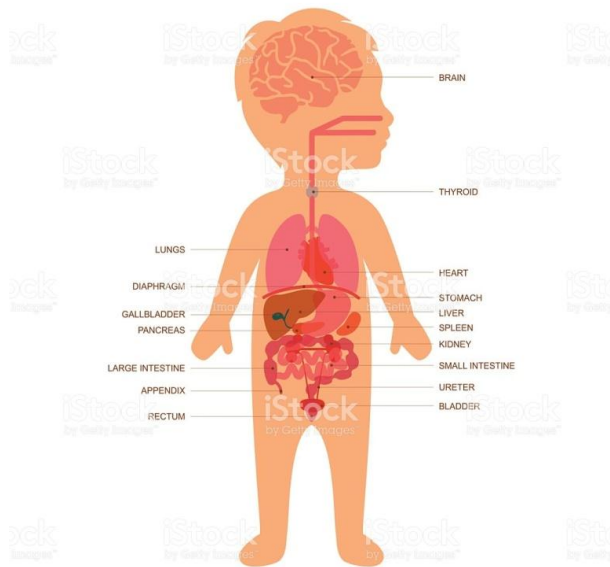
Doctor: Have you had any serious in the past?

Patient: No, none at all.

- 2) In the following picture try to identify the external body parts through listening to the audio recording: *neck, jaw, shoulder, armpit, elbow, upper arm, back, wrist, thigh, calf, leg, chest, breast, navel, stomach, hip, inguinal region, knee, shin*



Inside the Human Body



Bladder	The organ inside the body of a person, where urine is stored before it leaves the body.
Brain	The organ inside the head that controls thought, memory, feelings and activity
Heart	The heart sends blood around the body. The blood provides oxygen and

	nutrients to the body.
Kidney	One of the main jobs of the kidneys is to filter the waste out of the blood
Liver	A large organ in the body which cleans the blood and produces bile (a bitter yellow liquid which helps to digest fat).
Lungs	The lungs are one of the largest organs in the body, they work with the respiratory system to take in fresh air, and get rid of stale air.
Stomach	The organs in your body that digest food
Teeth	The hard white objects in the mouth, which are used for biting and chewing.
Urinary tract	The parts of the body which produce and carry urine.

Functions of the body consist mainly of the five senses: smell, taste, sight, hearing and touch (sensation). For instance, when you are hungry, you are in a restaurant the waiter brings you food. You **smell** it, it stimulates your appetite_ you want to **eat**, your mouth **waters**; filling with **saliva**. You take a **bite** on the food. It tastes good and you **chew** it and **swallow** it.

- **While-reading**

- 1) Try to guess and write the ordinary English words for the corresponding anatomical terms in the table using your medical knowledge

Anatomical term	Common word
abdomen	
axilla	
carpus	
coxa	
cubitus	
patella	
nates	

- 2) Fill in the gaps with the right terms according to the picture (human body 1)

Theincludes the abdomen, chest and loin. The following parts are included in the: elbow, finger, wrist and arm. Knee, leg and thigh are part of

- 3) With regards to the five senses, state other body functions (eg: *speaking, breathing...*)



Word formation: verb/ function/ noun

There are various body functions derived from verbs, such as:

Verb	→	Function	→	Noun
speak	→	speaking	→	speech
walk	→	walking	→	gait
urinate	→	urination	→	urine
menstruate	→	menstruation	→	menstrual period

- Verbs ending with “ate” “ale” form the function by adding “ion”, “ation” by the end respectively.
- Verbs ending with “k, th” form the function by adding “ing”

Practice

1) Complete the sentences with the right word form

- Take a deep(breath/ breathe)in.
- I have no..... (taste/ appetite) and I have lost five kilos in the last few weeks.
- When did you last..... (menstruate/ have) a menstrual period?
- What is your..... (sense of sight/sense of smell) like?
- (walking/walk) two miles a day makes you keep fit and healthy.



Language study: get a pain in, having trouble/with

When patients speak about their problem they often refer to a part of the body.

The following structure is used in communicative situations when the doctor/ pharmacist asks about or the patient describes the pain. Examples:

- I'm *having trouble with* my hip/ shoulder/ knee.

The doctor often needs to ask about a part of the body

- Do you *get any pain in* / your chest/ back / stomach.
- Do you *have any difficulty* swallowing?

Practice: Use the above structures and the following words to constitute a two-questions dialogue.

walking, breathing, urinate, leg, shoulder, neck, sight, vomiting, hearing, chest, back, arm.

- **Post-reading**

- 1) Look up in the medical dictionary the role of the remaining body parts shown in the picture (appendix, rectum, large intestine, pancreas).
- 2) Complete the following table with the appropriate words from the upper table

Digestive system	Urinary system	Cardiovascular system	Nervous system	Respiratory system

- **Language task**

- 1) Select one system and try, with your partner, to explain orally how it functions, according to your medical knowledge.
- 2) Choose words from the board to fill in the blanks in the following story

*“One day I was walking down the street. I saw a man waiting in the bus station. As soon as I reached the bus station the old man says, “My daughter, I’m feeling so **nauseous** and I’m afraid of walking alone.”*

*“Do you have a **headache?**”, “Yes, a severe headache with some fever. I think this is due to my **high blood pressure**”, “ so you need to go to the pharmacy that is right on the street corner”*

*Pharmacist: “Regarding the **symptoms** you have, I will give you an **antiemetic**, called ‘MOTILIUM’”. The old man did not understand so he asked for clarification ...
Pharmacist: “It’s a medicine that treats **nausea**, and if you have stopped **vomiting***

after two hour make sure that you continue to drink enough water to prevent dehydration”

3) Suggest an end to the story (write 2-3 sentences)

- Homework: define the vocabulary terms and use them in meaningful sentences.

4.7.2.2 Lesson 02: Respiratory System

Objective: by the end of this lesson, students will be able to describe and identify the respiratory system components. They will also be able to distinguish between different medication types, and use “*which, that, who*” adequately.

- **Warming-up**

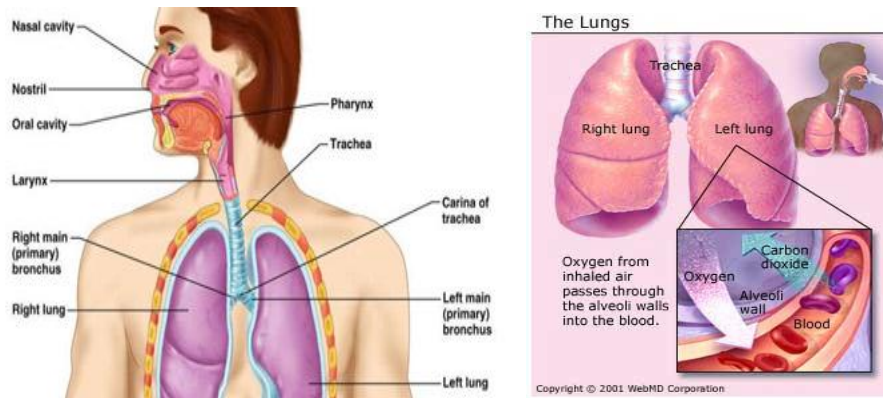
- *“I can’t breathe through my nose whenever I lay down or stand up; I have a cold right now and have terrible nasal congestion. I can’t breathe through my nose at all!”*
- What happens to this person?
- How often do you get your nose sides blocked up?
- Which type of medication from the following do you choose to help you breathe in?



- **Pre-reading**

- To what extent do you think breathing is important?
- Through this picture, try to figure out the processing of the air within the respiratory system (students are invited to come to the board and explain the process orally).

The Respiratory System



The day I learned how my respiratory system functions I was amazed!

As I inhale air into my **nose**, which contains mucous glands that secrete mucus to humidify the air, it travels down the back of my throat and into my windpipe, or trachea. Before it reaches there, it passes through the pharynx which connects oral cavity to nasal cavity, then the larynx or voice box which is responsible for voice generation.

My trachea then divides into air passages called bronchial tubes. For my lungs to perform their best, these airways need to be open during inhalation and exhalation and free from inflammation or swelling and excess or abnormal amounts of mucus.

As the bronchial tubes pass through the lungs, they divide into smaller air passages called bronchioles. The bronchioles end in alveoli, which are tiny balloon-like air sacs. It's impressive that my body has over 300 million alveoli!

The alveoli are surrounded by a mesh of tiny blood vessels called capillaries. Here, oxygen from the inhaled air passes through the alveoli walls and into the blood. After absorbing oxygen, the blood leaves the lungs and is carried to my heart. My heart then pumps it through my body to provide oxygen to the cells of my organs.

As the cells use the oxygen, carbon dioxide is produced and absorbed into the blood. My blood then carries the carbon dioxide back to my lungs, where it is removed from the body when I exhale.

Adapted from <https://www.webmd.com/lung/how-we-breathe>

- **While-reading**

1) Provide synonyms from the text to the following words.

excess= smaller=..... tiny=.....

Provide=.....

2) Fill in the gaps with the appropriate words from the text

- : It has tiny hairs that help filter out dirt, smoke and other nasty particles that need to be removed.
-: . It has two pairs of vocal cords—a false pair and a true pair. As air goes in, it is forced through the true vocal cords. When the person makes a sound, the nervous system sends signals to these vocal cords, which tighten or loosen according to the pitch of voice.
-: is composed of cartilage rings. One can feel these rings when one runs the palm of the hand over the front of the neck.
-: They are lobed elastic **organs that expand** when air goes in and contract when air goes out



Word study: vocabulary related to respiration

Classify the following words according to their word form. Fill in the other forms when possible.

sneeze, swallow, breathe, exhale, inhalation, cough, oxygen, oxygenated, breathing, absorption, humidify, wheezing, tightness, congested, ventilation.

Adjective	Verb	Function	Noun

- Latin suffix ‘-fy’

The suffix ‘fy’ has its basic meaning as “to make or cause to become”.

For instance humidify= to make humid

Practice: explain the following words: purify, acidify, clarify, classify

- Prefix pulmo/ root pneuma

The preffix “pulmo-” has a latin origin which indicates everything related to lung; such as, pulmonary infection wheras “pneuma” refer to air or breath

- Write down other words using the medical dictionary

Language study: present simple+ relative clause with that, which, who

1) Present simple tense

- is used for permanent states and situations

I live in Algeria

I have two sisters

- It is used for things which always happen, for actions and repeated processes.

Blood contains carbon dioxide oxygen enters the mouth

- It is used for instructions on how to do or not to do something

You breathe in air and do not let it out

- Used for facts about events at a fixed future time

Flight leaves at 10:30

- Used with stative verbs

Do you understand the pulmonary infection I don't like when my nose is blocked up

Practice

1) Write the verbs in the correct form

- The air..... through the nasal cavity. (pass)
- We live with one lung. (can)
- She university at 4:00 pm. (leave)
- My nephew a respiratory device every day. (use)
- The doctor about that patient's pulmonary infection.
(know)

- The patient strong faith. (have)

2) Relative clause with which, that , who

- What does the following sentence denote? What is the role of *that*?

“It has tiny hair called vibrissae ***that*** help filter out dirt”

A clause is a group of words with a subject and a verb. It can be a complete, simple sentence, or it can be a part of a larger sentence. A relative clause is only a part of a sentence. It adds meaning to the main clause of a sentence

‘Which’ and ‘that’ are relative pronouns and they introduce relative clauses.

Relative pronouns ‘who’ and ‘that’ refer to people

- The doctor *who/ that* treats pulmonary infections is a lung specialist.

Relative pronouns which and that refer to things and animals

- Sinuses which are hollow spaces in the skull.

Relative pronouns refer back to a noun, or introduce a new idea about the noun.

- The epiglottis is a tissue *that/ which* shuts off the larynx.
- It branches into the bronchi, *which* are two tubes *that* carry air into each lung.

Below, idea 1 is the main clause; idea 2 supports it and completes the meaning of the sentence - as the defining relative clause.

1: the respiratory system contains sinuses. 2: Sinuses help regulate the temperature and humidity of the air we breathe.

→ The respiratory system contains sinuses which help regulate the temperature and humidity of the air we breathe.

Defining relative clauses are used:

- In general statements
- To emphasize and focus attention
- To define and identify

- a) to survive b) to breathe c) to sustain itself
- Define hypoxia
 - a) a complete lack of oxygen b) a decrease of oxygen c) an increase in oxygen
- Indicate a newborn's normal breathing rate.
 - a) about 20 times each minute b) about 40 times each minute c) about 16 times each minute
- **Language task**
 - After exposing all examples of medication (through realia) the teacher relates a story, containing all types and asks students to sort out the appropriate term for each type.

“One day, when I was 9 years old, I was so curious and wanted to discover the content of the bathroom cupboard. I brought a chair and stared at the colorful plenty cupboard. I took first the nasal spray that I frequently saw my brother using due to his nasal congestion. Second, there were a lot of lotions and creams that my sister used to apply on her skin. Then I saw the yellow ointment which has a thicker texture. I remember I rubbed a great amount into my skin as I had a small injury when I was playing with my cousins in the playground. There was a “powerful arm” that my grandmother used to scare me with. It was the injection. Fortunately, her insulin injections were always in the fridge; otherwise I would have stolen one to try it! Besides tablets and capsules, I was always tempted to drink the syrup which has a strawberry flavor; however, I was allowed to take it only when I was coughing. Finally, I picked up the inhaler, and took it to my nephew. He was having a really hard time breathing.”

- When you are suffering from a nasal congestion and you want to cure it naturally. What do you opt for?: apple vinegar, steam inhalation, nasal irrigation, garlic, eucalyptus oil, ginger, spicy lemon tea, (other methods?)
- In small groups, choose 2-3 ingredients/methods and explain how they are used to clear your nose. Groups will exchange information orally.

Homework: Choose one medication type, and then try to build up a short story that happened to you, to your relatives or friends.

4.7.2.3 Lesson 03: Digestive System

Objective: by the end of this lesson, students will learn the digestive system and how it processes food. Also, they will be able to use the past tense and narrate events that happened in the past.

- **Warming up**
 - How often do you consume junk food?
 - Do you think it is healthy?
 - Have you ever had stomach problems (indigestion) due to fast food consumption?
- **Pre-reading**
 - Whenever you see the sandwich in the picture what happens to you?
 - Skim the text and give the general idea.
 - How many parts does the text contain?



Sandwich journey in the digestive system

One day, a turkey and cheese sandwich, with lettuce, onion, red bell pepper, mustard and mayonnaise, on multi-grain bread, decided to go within John's body. John was hungry; when he saw and smelled food he started to salivate. That's because digestion actually began in his brain which stimulated the secretion of saliva in his mouth and **gastric juices** in his stomach.

Once John took a bite of his sandwich, the digestion started. It was first chewed and digested by salivary **amylase**. The mass of chewed sandwich is called a ***bolus***. The passage of the bolus through the **esophagus** to the stomach occurred by *peristalsis*.

As the bolus approached the **stomach**, the lower **esophageal sphincter** relaxed, allowing the chewed food to enter. Peristalsis mixed the bolus with gastric secretions containing **hydrochloric acid (HCl)**, hormones and digestive enzymes to produce a thickslurry called ***chyme***. To aid digestion, HCl denatured **proteins**, making them more

available to attack by digestive enzymes. The digestive enzyme **pepsin** began to break down the protein found in John's sandwich (largely the meat and cheese with smaller amounts in the bread and vegetables). **Gastric lipase** began to digest the fats present in cheese and mayonnaise, but can only do so minimally.

Bit by bit, the **pyloric sphincter** that separates the stomach from the **small intestine** allowed the chyme to drop into the small intestine. Because chyme was mixed with HCl in the stomach, it had a very low **pH**. The **mucosa** of the small intestine did not have as much protective mucus as the stomach, but it did have something else to shield it from the acid - **pancreatic juices**. The presence of chyme triggered the **pancreas** to secrete bicarbonate to neutralize the acid, lipase to digest fats, **amylase** to digest starches, and **proteases** to digest proteins. The cells of the small intestine secreted additional enzymes to complete digestion. Since fat was present in the chyme, the **gallbladder** contracted and secreted bile into the small intestine. Bile acted like a detergent and emulsified the fat, breaking it into small globules, aiding fat absorption.

Once starches and sugars had been digested into **monosaccharides** - glucose, galactose or fructose - they were ready for absorption, they passed through into the bloodstream and to the liver. Proteins were broken down primarily to single amino acids. They followed a similar path to the liver, as with the monosaccharides. Because of their lack of water-solubility, the majority of the fats take a much different path. Most of the dietary fat came in the form of triglycerides and is digested into two free fatty acids and monoglycerides. While within the intestinal cells, however, these components were resynthesized into triglycerides. They were packaged with cholesterol and coated with proteins to form particles called chylomicrons. The lymphatic vessels transported the chylomicrons to the junction of the lymphatic and circulatory systems where they entered the bloodstream. Only a small portion of fats was absorbed into the portal vein. These were the smaller fatty acids that were more water-soluble than the long-chain fatty acids. Vitamins, minerals, water and many drugs were also absorbed through the intestinal mucosa.

Peristalsis pushed food waste, fiber (from the bread and vegetables) and any foreign materials through the small and large intestines. More water and salts were absorbed from the large intestine. As the contents moved downward, the feces were formed and eventually pushed through the anus.

Adapted from <http://www.innerbody.com/nutrition/food-and-our-digestive-tract>

- **While-reading activities**

- 1) Classify the words written in bold, from the text, into organs, substances and enzymes of the digestive system

Organs	Substances	Enzymes

2) Match the function with the organ



Word study: root pepsis, suffix ase, ic/ical

- The root “pepsis” has a Greek origin which means digestion; for example, *pepsin* is enzyme responsible for digestion (breaking down proteins)
- « ase- » is called a chemical suffix , from Greek origin, which denotes a colloid enzyme; such as : amylase, lipase
- The suffix « ic or ical » is of Greek origin, meaning pertaining to; for example, gastric, cephalic, chemical



Language study: past simple

- Why are the verbs in the text in the past simple?

Practice

1) Highlight the verbs in the text then convert them to past simple.

“The human respiratory system is a series of organs responsible for taking in oxygen and expelling carbon dioxide. The primary organs of the respiratory system are lungs, which carry out this exchange of gases as we breathe.

Red blood cells collect the oxygen from the lungs and carry it to the parts of the body where it is needed, according to the American Lung Association. During the process, the red blood cells collect the carbon dioxide and transport it back to the lungs, where it leaves the body when we exhale.

The human body needs oxygen to sustain itself. A decrease in oxygen is known as hypoxia and a complete lack of oxygen is known as anoxia, according to the National Institutes of Health. These conditions can be fatal; after about four minutes without

oxygen, brain cells begin dying, according to NYU Langone Medical Center, which can lead to brain damage and ultimately death”.

- **Post reading**

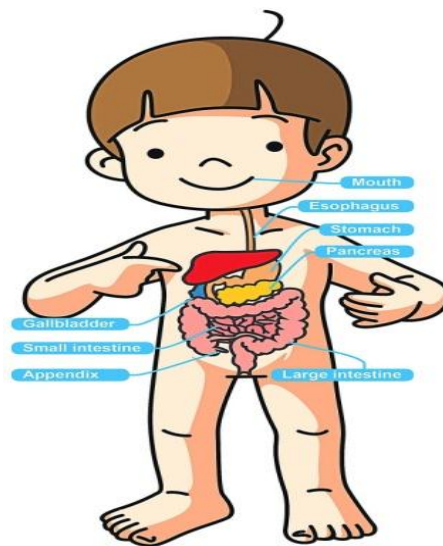
1) Turn the verbs in the following paragraph into the present tense

“Peristalsis pushed food waste, fiber (from the bread and vegetables) and any foreign materials through the small and large intestines. More water and salts were absorbed from the large intestine. As the contents moved downward, the feces were formed and eventually pushed through the anus”.

2) In groups of four, try to describe how the digestive system processes water.

- **Language task**

- Here is John!



1) What happens to John’s body in the following cases? Indicate the problem in the digestive system. (Students play the role of pharmacist and patient and try to explain the process of food within the digestive system for each case)

- John is worried because he is constipated

- John feels nauseous

- John is suffering from diarrhea

- John has heartburn

2) After giving students a small piece of chocolate, questions are raised about how it is digested, its components and its effects on the health.

4.8 Second year syllabus

The syllabus designed for second year students involves a general description of the content including topics, lexis, grammar and skills. It includes two units, with each unit comprising of three or four lessons where the content pertains to health-care topics and presents continuity from the first year content.

4.8.1 Unit 03: Human Anatomy 2

Objective: this unit targets the rest of body system that students of the first year tackle in the anatomy course. It aims at highlighting organs and functions and determining the relationship between the systems. It will focus on learners' language and communication skills in different learning situations. Texts are retrieved from Diaz-Gilbert's book 'English for Pharmacy Writing and Oral Communication', as it offers a variety of texts and language practices for Pharmacy students

	Lessons	Text/Topic	Functions/ Lexis /Grammar	Skills and Abilities
UNIT 3 Human Anatomy 2	01	Muscular and skeletal systems	<ul style="list-style-type: none"> • Neither.... nor • Scientific terms (Latin, Greek) for bones and nerves 	<ul style="list-style-type: none"> • Identifying and determining components and drawing the relationship
	02	Cardiovascular and central nervous system	<ul style="list-style-type: none"> • Not only..... but also • Acronyms 	<ul style="list-style-type: none"> • Roleplaying in a doctor's office
	03	Urinary system	<ul style="list-style-type: none"> • Modals ; must, may, should, could • Related vocabulary 	<ul style="list-style-type: none"> • Developing communication techniques •
	04	Endocrine/ reproductive system	<ul style="list-style-type: none"> • Accronyms • Suffix « in » like <i>adrenalin</i> 	<ul style="list-style-type: none"> • Labelling the structures •

4.8.2 Unit 04: Illnesses and cures

Objective: This represents the last unit in the course content. Students will be introduced to different kinds of illnesses as well as different therapies, such as herbal medicine and acupuncture. As students have already been acquainted with Botanical Studies they will easily become engaged in the process of giving advice about the plants and their benefits. Drug classification will also be tackled. Simulation-based instruction will be adopted along with involving students in tasks to employ the acquired vocabulary and grammar structures.

	Lessons	Text/Topic	Functions/ Lexis /Grammar	Skills and Abilities
UNIT 4 Illnesses and remedies	01	Eating disorders	<ul style="list-style-type: none"> • Suffix 'ia' 	<ul style="list-style-type: none"> • Enquiry skills
	02	Asthma	<ul style="list-style-type: none"> • Words related to breathing • Present perfect 	<ul style="list-style-type: none"> • Simulation-based situation
	03	Antimicrobials	<ul style="list-style-type: none"> • Cause/effect • 'used for' 	<ul style="list-style-type: none"> • Presentation skills / persuasion skills
	04	Verbena (herbal medicine)	<ul style="list-style-type: none"> • Compare/contrast • Latin name of plants 	<ul style="list-style-type: none"> • Problem solving

4.8 Conclusion

In order to meet students' needs and respond to the pharmaceutical field requirements, this chapter outlines the first year English syllabus, including sample lessons. It aims at giving the basics in medical knowledge and equipping the students with the necessary language elements. It introduces the theoretical concepts that underpins EMP course design and provides a variety of tasks to get students involved in real-life situations.

Each part of the course represents a layer of an overall process, starting with development of linguistic awareness of medical terminology, combined with

advancement of language skills, focusing on development of communicative competence in a medical context. A multi-focus syllabus approach structured upon vocabulary acquisition, contextual grammar practice, and integration of the four skills is likely to benefit motivation and learning, to support students to be able to communicate effectively in healthcare settings. The syllabus will be implemented in the next step (in the following chapter) to gauge its effectiveness and its impact on second year Pharmacy students.

CHAPTER FIVE
COURSE IMPLEMENTATION

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5.1 Introduction

Considering the results obtained in needs analysis among Pharmacy community members (students, teachers and pharmacists at work), the researcher suggested a sample syllabus (as described in the preceding chapter) along with a number of teaching practices so as to meet the students' needs and target situation requirements.

This chapter deals with the integration of action, that is, the implementation of the multi-focus syllabus together with application of new learning and instructional techniques within the classroom to help students not only boost their learning outcomes, but also assist them to acquire the language in a more enjoyable manner. The researcher first describes the intervention and states its significance, then specifies the plan and related factors including participants, context and teaching method. Also the researcher reports the evaluation methods for assessment of the students' performance and progress. Furthermore, the results are reported and discussed in relation to the third and fourth hypotheses. Finally, the chapter is concluded by further suggestions on how to better implement the multi-focus syllabus in an EMP context.

5.2 Background to the Intervention

As previously mentioned in describing action research (see 2.4.1.2), it is a research type that allows the researcher to intervene to bring about positive changes in the learning environment. With regards to this study, action research offers the opportunity to the researcher to act as a teacher in the language classroom and implement the multi-focus syllabus. Likewise, it permits trying out new teaching techniques for the purpose of evaluating not only their effectiveness on Pharmacy students' learning outcomes particularly, but also in terms of communication and making the learning process enjoyable.

It is believed that the instructional method plays a pivotal role in boosting the students' learning outcomes. After identifying target needs and learning needs of Pharmacy students at Blida University and designing the syllabus accordingly, the researcher sought to adopt an action research-based strategy to evaluate the

effectiveness of the syllabus as well as a number of teaching techniques (narratives, role-play and communication tasks) in developing students' communicative abilities. In this regard, the researcher conducted an action research intervention to deal with the research third and fourth hypotheses, which are specified as follows:

- 3) Designing a multi-focus syllabus would allow a wide array of instructional content and techniques that make students actively involved in the learning process.
- 4) Implementing a multi-focus syllabus may have a positive impact on Pharmacy students' communication in English.

The objectives of the intervention have been specified as follows:

- Expanding students' linguistic knowledge, particularly vocabulary acquisition, and improving reading comprehension.
- Involving students in communication tasks, such as role plays and introducing the narrative aspect in the language classroom to enhance students' interaction
- Developing students' linguistic skills into communicative abilities through language tasks.

5.2.1 Significance of the Study

The implication of this study can be twofold: first, as an action research project, this intervention serves to respond practically to Pharmacy students' target needs and learning needs through the design of the syllabus. In other words, it seeks to promote their understanding and acquisition of vocabulary terms, and improve their language skills, particularly reading and speaking, through communicative tasks and Latin-Greek- based vocabulary instruction. This product, the multi-focus syllabus, will be then evaluated to gauge to what extent it serves the students' needs. Second, the intervention suggests new practices and teaching techniques within the EMP context that may make the classroom atmosphere vivid and interactive. Therefore, it serves as an evaluation for both syllabus content and teaching techniques.

Evaluation as the last step of the previously mentioned methodological process (see figure 2.6) is a salient feature in ESP (Naghizadeh, 2014). It should be administered after implementation of the course. As stated by Hutchinson and Water (1989), there are two levels of evaluation: learner assessment and course evaluation. Techniques for both types will be further explored throughout this chapter.

5.3 Description of the Intervention

The plan to conduct the current action research has previously been defined in Chapter 2 (see figure 2.9). Accordingly, the steps are presented as follows:

5.3.1 Identifying needs

The needs identification and analysis has been described in Chapter 3. To recapitulate, the final findings indicate that communication plays a crucial role in the students' academic life and professional career. Pharmacy students need to ameliorate their communication skills so as to be able to handle any learning or work situation effectively. Vocabulary acquisition will contribute to a large extent to reach this purpose. The emphasis is also placed on reading, speaking skills, and medical terminology, contributing to effective communication. The results form the basis of the next step: syllabus design.

5.3.2 Design/ Plan

This step includes syllabus design and the intervention plan. The first part was accomplished in Chapter 4, where the researcher developed a multi-focus syllabus containing a variety of tasks and focusing on a variety of skills and abilities. The second part, the "planning", which is the starting point of this chapter, consists of setting the conditions under which the intervention occurs. This step also gives account of the techniques for collecting data, to be tackled in details in section 5.4.

5.3.3 Act/Teach

This stage represents the core of the intervention. The researcher teaches weekly sessions and delivers the lesson with careful attention to the classroom atmosphere, by

trying to make the learning process fruitful and enjoyable. The procedure is explained in section 5.5.

5.3.4 Observe

After conducting the intervention, the researcher gathers data obtained from research instruments to evaluate its impact. The data will be analyzed adequately in order to obtain reliable results.

5.3.5 Reflect /Suggest

In this step, the researcher discusses the findings in relation to the hypotheses stated previously in this chapter. When reflections are drawn, the researcher offers suggestions about the instructional content and practices, and calls for further investigation into teaching English for Pharmacy students.

5.4 Planning of the Intervention

After identifying the needs and getting an idea about the classroom atmosphere from the questionnaire of undergraduate students (Questions 14- 17), the researcher plans first to implement the multi-focus syllabus so as to target linguistic knowledge and skills necessary for Pharmacy students, and then to carry out investigations into teaching techniques and strategies that aim at energizing the classroom and making learning interactive and enjoyable. Thus, the researcher will proceed by identifying population and context first, and then move to define the data collection tools, which are the assessment techniques for measuring students' performance and interaction within the classroom, and their satisfaction with teaching and classroom activities.

5.4.1 Participants and Context

While the needs analysis was conducted with First and Second year Pharmacy students at Blida University in the second semester of the Academic year 2016- 2017, the action research was carried out in the second semester of the following year. Since English is taught only to First and Second year students (see Table 2.1), the participants were selected from these two levels. After designing a detailed syllabus

for First year students and determining the teaching procedure, the researcher decided to take action and implement the course with the second year level for the reason that they had already participated in the case study, thereby making the data more reliable since it is retrieved from the same population.

The teaching content of the action research was designed for 12 hours of classroom time in 8 weekly sessions of 90 minutes each. However, the time allocated by the Department for the purposes of this research project for this semester, was reduced to 6 sessions; from mid-February to the first week of April.

Most of the classes (5) took place in a lecture hall (auditorium) equipped with a white board and a projector. The last session was conducted in a classroom where there was no electricity, so the teacher adapted the teaching practice accordingly. Overall, the main constraints were the large and heterogeneous ability group, the absence of audio equipment for listening sessions, and the seating arrangement which restricted the type of instructional tasks. The researcher tried new teaching techniques and suggested a variety of activities within the multi-focus syllabus in order to maximise the effectiveness of teaching and classroom activities.

5.4.2 Teaching Method

The process to be followed in the language classroom is to adopt an inclusive approach to teaching that appeals to students' needs and learning styles and copes with the multi-focus objectives at the same time. Instead of following the PPP sequence, used by the majority of EMP course books (Hedge, 2000), the researcher opted for communication-oriented instruction. In other words, communication does not only represent the final product, but also initiates the learning process and is the core of the instructional tasks. This was maintained by Herazo et al, (2009) who stated that classical PPP (presentation, practice, production) should be replaced by communication as a route towards language learning. The teaching methodology is strongly related to information we have about how the learner's brain processes information, learned from cognitive neuroscience.

5.4.2.1 Instruction Process according to Cognitive Neuroscience

First, neuroscience is concerned with the understanding of neural mechanisms responsible for cognition (how knowledge is developed in the mind) and behaviour. It continually seeks to further the understanding of how the brain processes learning and how knowledge is applied (Simmonds, 2014). According to a survey conducted amongst teachers in relation to the effect of neuroscience in education, it was revealed that there is a high interest in neuroscience as it is seen to improve practice in terms of planning for teaching and learning. A subfield of neuroscience is cognitive neuroscience, which describes and explores mental processes. It is important for education as it facilitates the comprehension of human learning mechanisms and performance (Goswami, 2008).

It is suggested that educational neuroscience, as a cognitive neuroscience, has a plethora of models that are designed according to how the brain is understood to enable thinking and learning. As far as teachers are concerned, they do not need to be experts in neuroscience (ibid), but it is recommended for them to use the concepts of this field and to field-test them in the classroom with a view to improving the learners' potential.

Teaching English to medical students, namely students of Pharmacy, who are mixed-level groups, requires a set of techniques and a variety of tasks to suit the students' learning needs and to cope with different learning preferences. For this reason, the researcher adopted for Hilliard's cognitive model (2016) of processing information which targets effective communication. The lesson is delivered as follows:

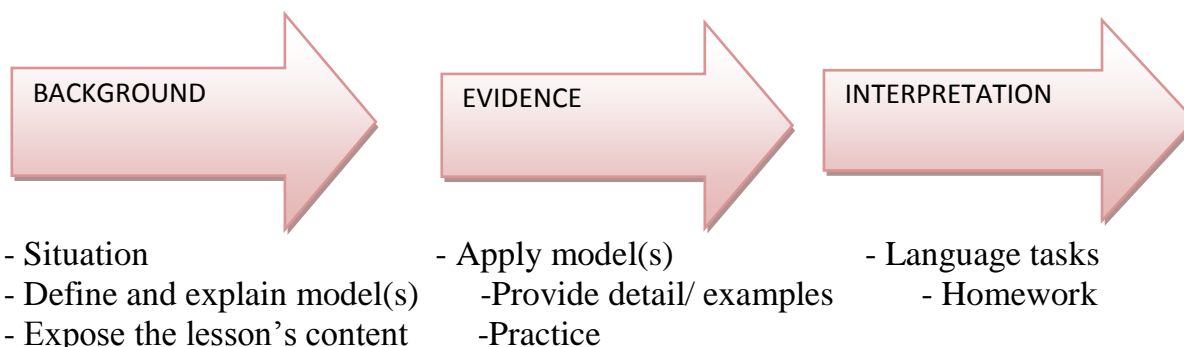


Figure 5.1 Cognitive analytical model

5.4.2.2 Hilliard's Cognitive Model for Education

The first step, "BACKGROUND", consists of introducing and defining the reading material and its form, i.e. whether it is a text, a dialogue, a journal article or a story. It starts with the warming-up and pre-reading activities. Then, the lesson's activities are determined together with the lesson's content (topic, grammar structure and functions). In the second phase of the lesson, "EVIDENCE", students are involved in the lesson's content, individually, in pairs or in groups, through communication activities so as to ensure understanding and engagement (doing text activities, applying grammar and word formation rules). The last phase, "INTERPRETATION", includes language tasks that students perform on their own, with minimal assistance from the teacher. It involves the integration of three to four skills so that students are offered the opportunity to apply what has been learnt throughout the lesson. It also deals with homework students have to accomplish as follow-up activities.

5.4.3 Instruments and Data Collection

As far as the action research instruments are concerned, the researcher has opted for field notes taken during and after the lesson, as well as the achievement test set at the end of the intervention process. Moreover, a focus group discussion was conducted to consult students' views about the teaching practice and syllabus content.

5.4.3.1 Teacher Field Notes

First, the researcher selected field notes written in the form of a Teacher Observation Sheet that contains the different criteria the teacher intends to focus on during the intervention. The following table describes these criteria.

Criteria	Questions
Students' interaction with instructional materials	<ul style="list-style-type: none"> - Are handouts appropriate to students' level and interest? - Does the video projector have an impact on students' comprehension and attention - Are the selected texts appropriate to the students' level? Do they reflect their background knowledge?
Educational climate	<ul style="list-style-type: none"> - Are the students enthusiastic? - Is the atmosphere participative? - Do the students keep eye contact with the instructor?
Instructional methods	<ul style="list-style-type: none"> - Are students interested in group work? - Do students understand and are they satisfied with the teacher's instructions? - Are students enthusiastic when performing role plays? - How do students react when telling or being told a story?

Tableau 5.1 Field Notes Grid

This data collection instrument aims at revealing the effect of using new teaching techniques in helping Pharmacy students reach communication. This research tool will also reveal the students' interaction while performing the activities included in the multi-focus syllabus.

The researcher kept record (as quick notes) of the observations at the end of the session, without reflection on the classroom atmosphere, students' interaction, involvement and performance. It is challenging for any researcher to record students'

behaviour and interaction while teaching (Johnson, 2012); thus, the researcher used audiotape to record students' verbal behaviour (selected because videotapes may be more intrusive and students may not behave genuinely in the classroom). By the end of the day, the teacher-researcher reflected back on the lesson and wrote insights on the classroom learning environment.

5.4.3.2 Achievement Test

5.4.3.2.1 Written Test

The researcher designed an achievement test to measure students' learning outcomes at the end of the instructional period and administered the test by week 6 of the semester (2017-2018). The test items were designed to reflect General and Medical English knowledge, involving reading, vocabulary, grammar and, to a lesser extent, writing - there wasn't enough time to develop the writing skills; besides, the needs analysis results did not highlight the development of writing skills. With regards to the listening skills, the researcher questioned the feasibility of the test because of the lack of necessary equipment in the auditorium, a fact that does not produce reliable results. Therefore, the researcher made special focus on the language skills and components needed to attain communication in the Pharmacy educational and occupational environment; namely, reading comprehension, speaking skills and vocabulary acquisition as revealed in the results of needs analysis, and to a lesser extent grammar and writing.

The written achievement test was composed of a text and its visual support, reading activities, word study and language study including grammar items as well as medical expressions (see appendix G). Firstly, students were asked to answer questions about the text content to check their understanding of the input. In the same vein, they were provided with words and were asked to pick up from the text words that are close in meaning. A fill-in-the-gaps activity was set afterwards to reinforce meaning and contextualize medical words. The second section involved word study, intending to check lexical knowledge as it dealt with Latin and Greek derivatives and

terms defining body functions and organs. Moreover, another activity was established to enable students distinguish between different word forms (noun, adjective, function and verb). In the third section, grammar rules were exploited to check whether students discern the use of structures according to contexts. The test concluded with writing a four line paragraph describing the process of water inside the human body. The grading of the test was out of 30 divided between sections as shown in the following pie chart.

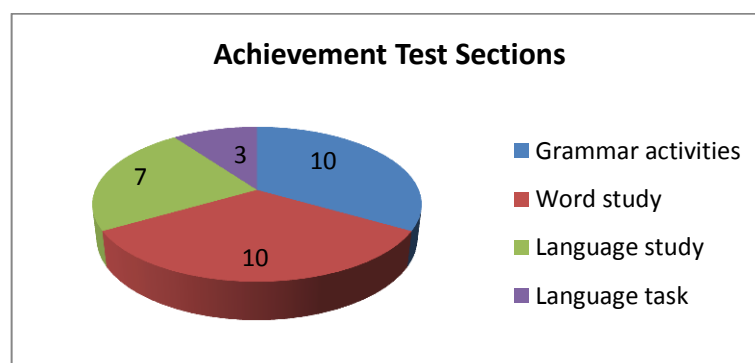


Figure 5.2 Achievement test sections

The purpose is to analyze the students' written performance as a whole, simultaneously checking the student's achievement in each section to gauge to what extent the language item or skill was mastered. As demonstrated in the graph above, the grading scale has not been divided equally among the language items due to the importance factor. Subsequent to needs analysis results, reading comprehension and vocabulary acquisition were emphasized. Grammar was also highlighted by some of the informants, since it is also given priority by EMP literature. Writing was granted less importance. Therefore, the achievement test was designed accordingly and the grading system was established depending on the priority of language items and skills for the Pharmacy academic and professional domain.

5.4.3.2.2 Oral Test

As far as the speaking skills are concerned, it was challenging for the researcher to conduct the oral test in the existing teaching conditions. In actual fact, students do

not attend the English class regularly and most of the time they want to leave after the first hour. Oral communication testing is time consuming, therefore, this had to be carried out through assessment of performance on communication tasks (such as role plays), since it is feasible for this to be done via groupwork (Al Odhayani & Ratnapalan, 2011). Participants were assessed on a number of criteria, covering accuracy, fluency, pronunciation, vocabulary and interaction. Each criterion is mapped on the range of 1-5 scale as shown in the following table:

Testing criteria	Student 1					Student 2				
	1	2	3	4	5	1	2	3	4	5
Fluency										
Grammar										
Vocabulary										
Pronunciation (stress, intonation)										
Information exchange and interaction										

Tableau 5.2 Oral Test Rating Scale

With regards to the oral test, it is based on authentic speaking situations which students may encounter both in the university environment and in everyday life. The test was contextualized, that is, students select one of the topics they have already dealt with in the classroom, and then organize a role play around this topic using the appropriate vocabulary. To make students feel at ease and encourage them to speak, the teacher explains the rating scales and emphasizes that they need to communicate with each other. Since non-verbal communication skills were not covered in the program, due to time constraints, this was not a focus for the assessment.

5.4.3.3 Focus Group Discussion- assessing learners' attitudes and reaction to instruction

Second, to keep record of students' reactions and attitudes, the researcher opted for focus group discussion, in which participants provided self-perceptions on their own progress in terms of language skills learned and the instructional phase. The results were cross checked with those of the achievement test. Students were also asked to provide their viewpoints concerning activities and tasks suggested in the classroom. This research tool was used by the end of the instruction cycle to gauge the efficacy of the intervention.

The interview is constituted of eight questions aiming at two main objectives:

Questions 1 to 4 aim at revealing students' attitudes regarding the syllabus content. The questions revolve around the following points:

- The teaching content: texts and activities.
- The reading comprehension process with regards to the suggested activities.
- Vocabulary learning through Latin and Greek based instruction.
- Improvements concerning the ability to communicate in English.

Questions 5 to 8 aim at exploring the students' viewpoints with regards to the teaching method (lesson delivery) and techniques. The questions explore the following ideas:

- Teaching through stories.
- Benefits of group work.
- Attitudes towards performing role plays.
- Students' preferences.

In view of the stated objectives for the present intervention, the questions are gathered under two main rubrics according to their aims: first, the assimilation of linguistic knowledge and skills; second, the teaching techniques used in the classroom.

5.5 Intervention (Action)

The EMP course was implemented in the second semester 2017-2018 with second year Pharmacy students at Blida University, as they had already participated in the needs analysis process in the academic year 2016-2017. About forty students regularly attended the English class organized by the researcher. Since the session is scheduled from 2:00 pm to 3:30 pm, students frequently prefer to leave as they do not consider the English module as an important one. The number of the participants in attendance varied from 38 to 90.

5.5.1 Intervention Plan

According to the time allocated by the department concerning the English language teaching, the researcher was given eight (8) sessions over 8 weeks (one and a half hours for each session) to deliver the syllabus content. However, after the third session, there were some changes made to the schedule, so the number of sessions was reduced to 6, which is not sufficient to fulfill the course objectives. Therefore, the researcher adjusted the teaching content accordingly and planned for each session as follows.



Figure 5.3 the Intervention Plan (adapted from the multi-focus syllabus described in table 4.2)

The teacher researcher starts the instructional period by verbally giving the objectives of the course and explicitly stating the teaching method, that is, how the teacher intends to deliver the lesson. Before introducing the lesson, the first session

starts with an overview about the teaching objectives and a brief introduction to the course in order to familiarize students with the syllabus content and the teaching method. Each lesson is centred on a reading text that is followed by a variety of activities included in pre-, while- and post-reading phases. These activities are followed by a language task in which the four skills, and grammar and vocabulary are integrated. The tasks are meant to afford opportunities for the students be able to practice the items acquired, using the language skills, for communicative purpose.

The teaching content was mainly focused on the language skills and language items extracted from the needs analysis:, reading comprehension, speaking and vocabulary acquisition, as well as communication in academic and professional contexts. The lesson includes the *warming up* phase where the teacher tries to attract students' attention and stimulate their interest in the lesson content. Second, when being introduced to the reading material (text, journal article, story), students are invited to do *while reading* activities which deal with comprehension questions and vocabulary retrieved from or related to the reading material. In addition, the grammar point is contextualized then analyzed. Third, the *post reading* phase involves follow-up reading activities which offer the students an opportunity to further practice the language skills and reinforce their understanding of the topic in hand. Finally, the language task comes towards the end of the lesson, involving groupwork discussion on a topic and consideration of possible solutions. In this way, the learners practice a variety of language skills, with particular focus on speaking. The following diagram illustrates the order of activities involved in the lesson.

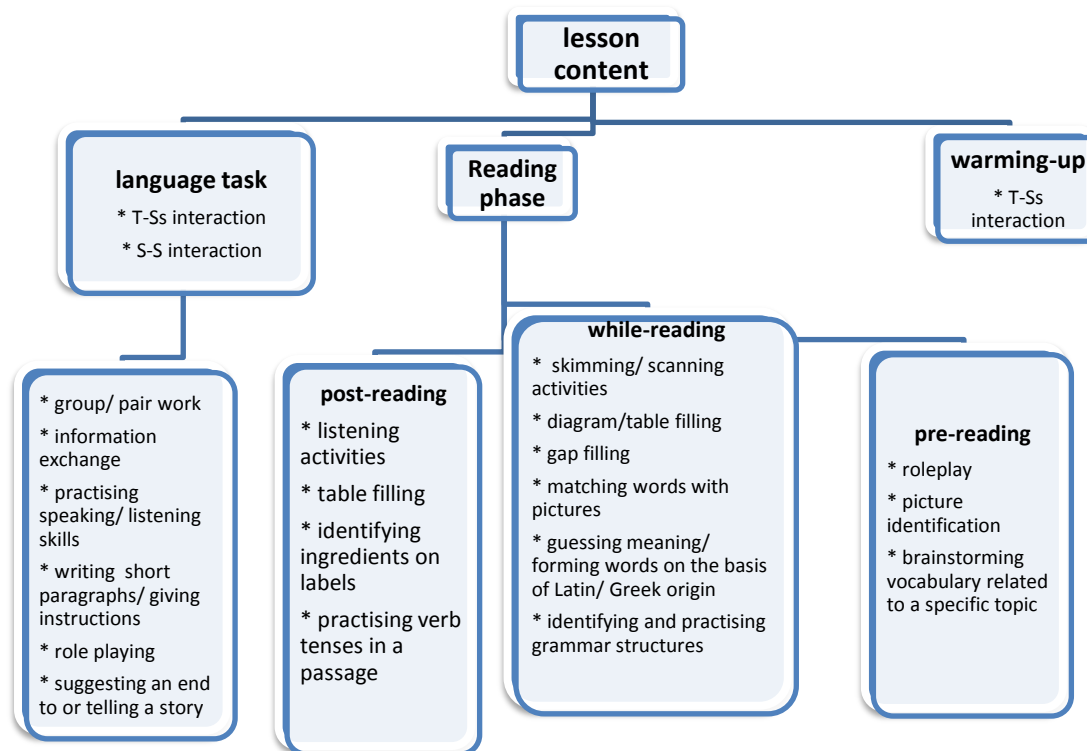


Figure 5.4 Lesson phases and content

With regards to listening comprehension, the classroom environment was not favourable for administering listening activities. The researcher once brought the amplifiers to play an audio recording, but, unfortunately, the sound couldn't reach the students seated in the middle seats of the auditorium. The teacher, therefore, had to read the transcripts out loud for the students to be able to answer the questions.

As the multi-focus syllabus emphasizes different language items, various means are required to deliver this content. After tracing the path of lesson delivery (see Hilliard's cognitive model figure 5.1), the researcher used narratives and tasks such as role plays as teaching technique and method, in order to meet the students' needs in a communicative and enjoyable atmosphere. While story-based instruction focuses on individual performance and how the message gets through from one to many, communication task-based learning is mainly concerned with involving two or more students in communicative, collaborative work. Although communication-oriented instruction is predominantly based on meaning-focused activities, the researcher has

dealt with grammar practice in all the lessons, requiring students to try to raise their level of grammatical accuracy in their individual or group performance.

5.5.2 Storytelling as a Teaching Technique

Storytelling was used as a teaching technique not only to help students retain knowledge and vocabulary, but also to energize the classroom environment. It is known that stories are typically related to events that happened in the past (Jones, 2012), however, prompting students to tell stories helps them to develop fluency (ibid) and makes them more likely to remember the content and vocabulary (see 1.8.3.2.2). The teacher as storyteller intended to trigger students' interest and grab their attention to follow the content of the story. Narratives usually use the past simple tense to tell events. Even though the medical discourse is characterized by the use of present simple to describe facts, illnesses, body systems... etc, the researcher used this technique to teach the past simple and content knowledge in English, which students already know in French. In the lesson which deals with the respiratory system, the researcher used the present simple in narrating the process of the digestive system to recreate the system in an active and dynamic manner.

Students were asked to suggest an end to a story to practise their speaking and use vocabulary they learnt about general health. Another narrative-based activity is to tell a short story about something that happened in the past related to a health situation. The purpose is to enhance students' ability to speak in front of a group of students and benefit from the reaction of the audience when they ask for repetition or clarification. The ultimate purpose is to help students improve their communication skills.

5.5.3 The Role of 'Role-playing'

For the purpose of helping students practise and improve their speaking skills and use content knowledge in an authentic situation, the researcher incorporated role-playing activities in the English class. The learners either perform a given situation or write their own dialogues. Students were asked to perform a dialogue as they would in real medical or everyday life encounters. To illustrate, after learning about healthy

lifestyle habits, students are invited to perform a dialogue in which one student plays the role of a nutritionist and the other acts as a patient. Another example is the doctor/patient role play in which students use new vocabulary and expressions. This activity is intended to introduce students to clinical situations and help them learn how to interact with the interlocutor. The teacher makes it clear that the ultimate purpose is to convey the message fluently, so students do their best to transmit the idea using the acquired vocabulary regardless the grammatical mistakes.

Either in using narratives or communication tasks, the teacher intended to enable students to understand and being understood when communicating, while at the same time focusing on the acquired vocabulary items and using the grammatical structures previously learnt. The following diagram illustrates how different language elements are integrated within the story-based activity or any other communication task.

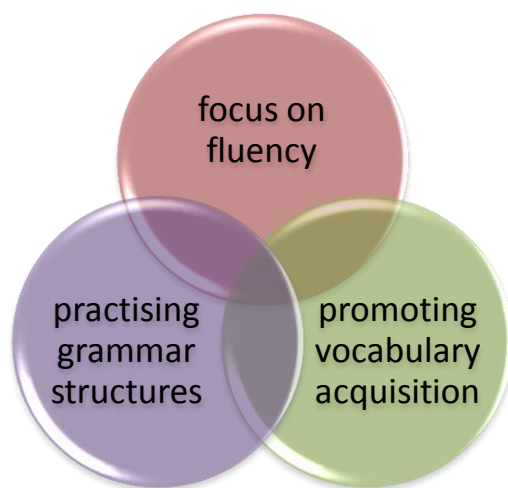


Figure 5.5 Elements included in communication tasks

To conclude, the intervention conducted among second year students was intended to check the efficacy of the multi-focus syllabus and measure the effectiveness of the suggested teaching techniques. At the end of the intervention, twenty students sat for an achievement test, and only ten of them participated in a focus group discussion.

5.6 Observation

The observation phase covered the first to the sixth session of the intervention period, aimed at assembling data that would help the researcher to gauge the extent to which the implementation of the multi-focus syllabus was successful, and to measure the efficacy of the teaching practise. This can be realized through the following research tools that the researcher selected for the action research: teacher field notes, achievement test and focus group discussion. In this section an analysis and interpretation of results is provided.

5.6.1 Field Notes Analysis

While teaching, the observer records her observations without interpretation. Later, she proceeded to analysis of the data obtained. Teacher field notes were taken for the purpose of obtaining reliable information about students' reactions to activities incorporated in the multi-focus syllabus, also to see their responses towards use of story-based instruction and communication tasks. Field notes considered the following items:

- **Educational climate**

Since the English class was the last session of the day, most students leave home. The number was restricted to 90 in the first meeting and started decreasing as the course progressed, registering 38 by the last session. This is due to the fact that attendance is not compulsory and not all the students realize the importance of acquiring the language. Although the classroom atmosphere is not highly participative, students who attend regularly show their interest by addressing questions or asking for clarification. There are only five to six students who are willing to participate each time.

- **Students' interaction with instructional materials**

For each lesson the teacher prepared a handout and designed visual support. The participants found the handouts a useful supplement as they contain the text,

vocabulary and grammar section with sample activities, so students were required to write only during the activities and take additional notes when necessary. Since the reading material was adapted according to students' background knowledge, text comprehension seemed relatively accessible, since they were often able to apply previous information they have received in French.

Through use of the projector in the English class, the teacher noticed an increased engagement from students. The use of the data projector to display the content of the lesson was ergonomically suitable for the participants because not all of them could see the board. Moreover, showing the images through the slides enabled the students to make inferences about the topic being dealt with. In fact, using power point presentations was a way to gain time since students were more easily able to discern which information to take. Also, they did not have time to chat among themselves since the teacher was not writing the lesson content on the board.

- **Students' reaction to the Instructional method**

At the beginning of the intervention, students were reluctant to participate; however, when the teacher introduced students to collaborative work in communication tasks they were enthusiastic and welcomed the idea, responding positively. Before starting the task, students couldn't understand the instructions very well in English, so the teacher was obliged to explain few words in Arabic. This was the most effective course of action initially, since students were unlikely to make efforts to look up words in the dictionary and this would be a distraction, and time consuming.

The overall atmosphere appeared to be communicative. Most students showed their enthusiasm for working in pairs or in groups by providing ideas and sharing them with their classmates. When performing role plays, the participants refused to stand up in front of the audience, and it was challenging for them even to speak up from their places. Each time they wanted to give the written version of their work instead of

speaking because they are not used to participation in the rest of modules. Only 7 to 9 participants were ready to perform the role play or tell a story.

The first story that the teacher narrated (see 5.7.2.1 lesson 01/ post-reading) was a kind of fill-in-the blanks activity. Students were attentive and tried to spot the words from the board to complete the missing words in the story. In the second storytelling students followed the story and could identify the type of medication they were required to give (see 5.7.2.2 Lesson 02/ language task). When asked to provide a similar short story, only three students volunteered and narrated it to the audience. This is due to the fact that students are not accustomed to speak publicly and are quite often shy and afraid of presenting meaningless or grammatically incorrect utterances.

5.6.2 Focus Group Discussion

The second data collection tool was focus group discussion organized with the participants (ten students) in the achievement written and oral test. In this step, students provided a self-perception of their progress regarding language skills learned and the teaching procedure. The researcher opted for a focus group discussion in order to assess the reasons for the observed behaviour of the students and draw conclusions about the teaching content and procedure, and the learning outcomes.

5.6.2.1 Respondents' answers

Questions 1 and 2:

The participants' answers to these questions were almost similar. The majority stated that the texts and activities included in the syllabus are interesting and respond to the needs of their domain. Only two students claimed difficulty in grasping the medical terms found in some texts, like "A journey of a sandwich". With regards to reading comprehension, all students stated that the suggested activities helped them to a great extent in understanding the overall idea and most of the more detailed ideas of the text.

Questions 3 and 4:

With regards to communication in English, the participants felt an improvement. Five students added that they found communication through the activities an amusing way to practice the language. Although three female participants talked about their shyness as an obstacle to speaking freely in front of an audience, the rest of the participants stated that they overcame this obstacle and started communicating in English in a relaxed way. As far as vocabulary instruction is concerned, it seemed to be beneficial to most of the students except three, who found reference to Latin and Greek irrelevant, as ancient languages.

Question 5:

When asked about stories, students were enthusiastic. They explained that this method is not only interesting and entertaining, but also helps them better internalize information. Listening to stories, as they reported, is a fruitful way of teaching, and telling stories, as stated by six students, helps them practise their speaking skills and gradually overcome their fear of audience.

Questions 6 and 7:

Working in groups and performing role-plays were new teaching strategies for the participants, as reported. The majority (8 students) was enthusiastic about group work, stating that it was beneficial to listen to one another and exchange information. The other two students stated that they prefer working individually as they were used to. With regards to performing role plays, participants who liked group work enjoyed the performance, in spite of the fact that they felt anxious. They also reported that the activity was useful in terms of learning interaction and communication skills. For the rest, they explained that it was embarrassing to make mistakes and not be able to speak fluently in front of their classmates.

Question 8:

Concerning the students' viewpoints about what they liked best, most of them agreed on the fact that lessons were presented in enjoyable manner. Five students commented about the warming-up phase where they mentioned that the content was well introduced. The rest added that storytelling stories or role-playing helps them practise the acquired vocabulary and grammar and renders the learning process fruitful.

5.6.2.2 Interpretation of Results

The focus group discussion was addressed to ten students who participated in the action research, and sat for the achievement written and oral test. The results revealed the students' satisfaction with the learning experience they had had during the six weeks of the course, stating that they were content with the current syllabus and teaching procedure. The students' positive attitudes towards texts and activities reflect the authenticity of the teaching material that proved to be efficient in delivering information to and checking understanding. It appears that the activities suggested for the reading comprehension process were adequately selected to facilitate the skills task and vocabulary comprehension, and thus, improve the students' reading abilities.

Despite the fact that a few female students were overwhelmed with shyness whenever facing the audience to speak, most of the participants asserted that they felt an improvement in communication. This fact is due to the efficiency of activities, including telling stories and performing role plays that helped them to express ideas, and apply the acquired terminology and grammar. Moreover, vocabulary comprehension had been made more accessible to most students thanks to the Latin-Greek instruction and inferring meaning from text.

Storytelling as a communication activity proved to be efficient for most of the participants. Whenever the teacher tells a story, the students are more likely to internalize information and remember the new words. Similarly, whenever they are asked to suggest an end to a story or create a new one, they make an effort to contextualize the newly acquired words and structures. According to the students, it

helped them practise their speaking skills and monitor their stress when facing the audience. The Pharmacy students' responses to this technique demonstrate its effectiveness for teaching and learning English in a medical context.

Working in groups and performing role plays have also been approved by the majority of the respondents, except for two students who favored working individually due to their learning preferences. The rest of the participants showed their satisfaction and acknowledged the benefits of group work, demonstrating that the intervention had positive impact on students' initiative to work in collaboratively and share information to improve their communication skills. In the same vein, performing role plays during the intervention proved to bring about positive effects on students' willingness and capacity to communicate. Additionally, the data obtained demonstrates that this activity helped students boost their learning outcomes while at the same time enjoying the learning process

The final comments of the participants emphasized the teaching procedure, that is, the staging of the lessons. The students were satisfied and reported their agreement with the suggested lesson plan for the intervention. As the lesson starts with a written and visual support, students are better initiated to the content. They are eager to know about what comes next, as was noticed through the classroom observation. After the warming-up phase and text exploration, the next step engages students in language practice, in which they were satisfied to work either individually or in groups.

5.6.3 Achievement Test

The achievement test was set in order to check students' learning outcomes after the implementation of the multi-focus syllabus. The intervention ran from February to April. The test was administered to 15 students since not all the participants agreed to sit for it. It was allocated one and a half hours and the total score was 30.

5.6.2.1 Results of the written test

After grading the students' papers and obtaining the scores, the investigator provided a statistical summary to highlight the main results. The following are the scores of the respondents:

Respondents	Scores
R1	26
R2	24
R3	29
R4	23
R5	21
R6	22.5
R7	20.5
R8	21
R9	19.5
R10	25
R11	18.5
R12	21.5
R13	26.5
R14	25.5
R15	16.5

Tableau 5.3 Respondents' scores

These results are interpreted in terms of central tendency; including Mean and Median, and standard deviation.

The mean represents a well-known statistic of summary used for obtaining the average of a set of numbers. For this study, it was obtained manually as follows:

$$M = \frac{\sum x}{n}$$

Σ represents the total of scores while N is the number of sample scores

$$M = \frac{331}{15} = 22.066$$

The Median is the middle score in the list of scores, which is in this case: 22.5. **The standard deviation** shows how much variation there is from the average (mean). To calculate the value, we need the following formula:

$$SD = \sqrt{\frac{\Sigma(x-M)^2}{n}}$$

Where Σ means “sum of”, X is a value in the scores set (example: 20.5), M is the Mean and N is the number of scores as displayed in the table above. Therefore, the standard deviation is:

$$SD = 8.326$$

The results obtained from this analysis are summarized in the table below:

	Values
Mean	22.066
Median	22.5
Standard Deviation	8.326

Table 5.4 Central tendency and standard deviation of the achievement test

The table shows that all the participants achieved the average, and it was revealed through the median that the average of the students’ scores was considerably high (all the respondents had above 15). With reference to standard deviation, it is quite low which indicates that the scores tend to be close to the mean, reflecting a population of similar ability. This is due to the fact they have all attended the same course, which makes them more likely to develop the language abilities to a similar level.

To shed light on students' performance in each section, the table below displays the marks the respondents obtained beside the mean, so as to compare their achievement with the average.

Respondents	Reading activities/ 10	Word study / 10	Language study/ 7	Language task/ 3
R1	9	8.5	6.5	2
R2	8	7	7	2
R3	10	9	7	3
R4	8.5	7	6	1.5
R5	8.5	7.5	4	1
R6	8.5	8	4.5	1.5
R7	8	7	4.5	1
R8	6.5	8	5	1.5
R9	5.5	6	7	1
R10	9	8	6.5	1.5
R11	5	6.5	6.5	0.5
R12	7.5	7	6	1
R13	8.5	9.5	7	1.5
R14	8.5	8	6.5	2.5
R15	5	6.5	4.5	0.5
Mean	7.733	7.56	5.9	1.46

Table 5.5 Respondents' performance in language sections

The results generated in the table above demonstrate that all students performed well and achieved the average in the three first sections: reading, word study and language study. However, in the last part, which consisted of writing, not all students attained the average

5.6.2.2 Results of the Oral Test

To assess speaking skills, mainly their communicative abilities, the investigator arranged with the students for a one hour session after the intervention to organize the oral test. There were only 10 students in attendance for the oral test, which consisted of performing role plays to exchange information and practise speaking skills. The researcher used five criteria to gauge the students' performance (as shown in Table 5.2), and each criterion is out of 5. The following table illustrates the Mean of each criterion: fluency, accuracy, pronunciation, vocabulary and interaction.

	Fluency	Accuracy	Pronunciation	Vocabulary	Interaction
Mean	3.6	2.85	3.75	4.3	3.1

Table 5.6 Mean of oral test items

The above table shows that the mean for each criterion varies according to the students' performance in the role play activity. It demonstrates that a high proportion of participants used the appropriate vocabulary for the situation. Fluency was prominent among the participants; however, not all students could build accurate sentences as they were focusing on delivering the message and recollecting the right words. Most students pronounced the words intelligibly, and, the majority of the respondents demonstrated communicative interaction skills while performing the role play.

5.6.2.2 Interpretation of Results

As a whole, the results yielded from the analysis reveal that all the students performed well and got scores above the central value. The lowest performer got 16.5, which is closer to the average (15). This confirms that the test has been made accessible for students, respecting the language skills and items focused on during the intervention. It is noticed that the respondents' marks in the four sections varied for the reason that the researcher did not grant equal importance to all the skills and language items throughout the period, in acknowledgement of the findings of the needs analysis.

As far as the first section is concerned, all the participants answered the majority of questions related to reading comprehension correctly, except for two students who obtained the average. It is noteworthy to shed light on the correct answers that reveal the students' understanding of reading techniques, such as scanning, making inferences with pictures, sorting out synonyms and fill-in the blanks with words provided in the text, all activities which were practiced during the intervention phase. It is thus confirmed that the participants developed their reading comprehension skills and succeeded to a considerable extent in converting the reading skill from a linguistic skill to a communicative ability whereby they are able to understand the message of the writer.

Regarding the activities related to vocabulary and word formation, the entire group of test-takers had good scores in this section. In the two first questions, where students were required to provide the lexical meaning of Latin and Greek derivatives, the results were 100% positive. This is notably due to the Latin-Greek instruction that they received in the intervention, helping them to infer meaning for vocabulary items. In the third activity, involving word formation, most of the students performed well, whereas a minority (5 students) had below the average (≤ 1.5) mainly because they simply completed the table from the text without paying careful enough attention to the instruction (to relate words to the root 'pneuma' and prefix 'pulmo'). Through this activity, it is revealed that students' ability to make a distinct difference between word forms has been developed. Finally, the last item in this section demonstrated that the respondents could recognize the definitions of health-related vocabulary.

Most of the respondents (about 10) did well in the language study section in which they were required to fill in the gaps with the appropriate grammar structure. Although grammar was not highly emphasized in the needs analysis, it is an important component in EMP course design (see section 1.8.4.2). So, the researcher devoted a rubric to grammatical structures in the syllabus, and these were included in the test, to assess use of tenses and pronouns. The first and second activities revealed the respondents' ability to recognize the appropriate structure through contextual clues,

demonstrating understanding of the different uses of grammar structures. Concerning the last activity, almost all students answered correctly. It represented an opportunity for them to review the present simple and demonstrate their ability to recreate past events in simulated scenarios.

The last task aimed at revealing students' capacity to communicate an idea through writing. Although the writing skills were minimally emphasized during the intervention, the investigator included a short writing task to assess students' ability to describe a body system process. Most of the students (12) described the process thoroughly, whereas the rest of them could not provide meaningful sentences. It was noticed that sentences were not highly accurate (except for 2 students); however, students did manage, to some extent, to use what they have acquired in grammar in order to construct sentences conveying meaning. It is confirmed, then, that students developed the ability to describe the body system in English, together with the appropriate use of grammar items.

As far as the oral test' results are concerned, the mean value obtained from each criterion reveals an overall improvement in communication. As the main purpose for the activity was to communicate, students mainly focused on transmitting the message fluently regardless of grammar mistakes. This fact indicates that students' performance was mainly triggered by their willingness to act a certain role and by practicing their speaking skills and the vocabulary they had assimilated in the intervention phase.

The results yielded from the achievement test reveal that the intervention content was beneficial for students in terms of reading and vocabulary comprehension activities, and communication tasks such as role play.

5.7 Discussion of the Main Results

The present action research was carried out to check the efficacy of the multi-focus syllabus on Pharmacy students' communication in English and the effects of narratives and communication tasks in getting students involved in the learning process. The data collected from the participants in the action research through

teacher's field notes, focus group discussion and achievement test is intended to highlight to what extent the suggested syllabus helps Pharmacy students be actively involved in the educational content and achieve communication.

As far as the third hypothesis is concerned, all research instruments used in the current action research, i.e. teacher's notes, focus group discussion and achievement test, in particular the oral test, provide information about the students' interaction within the classroom. According to the teacher's field notes, the students' engagement in the classroom was fostered mainly by the use of visual aids and students involvement in collaborative work. During the intervention, second year Pharmacy students were enthusiastic about the visual support the teacher provided for each lesson and mostly welcomed the idea of being involved in activities where they were invited to share, reflect and express opinions with their classmates. This perception was confirmed through focus group discussion responses where students stated that the written and visual support was a good initiation, enabling optimal engagement with the lesson's content. Concerning the language tasks, students were satisfied to be involved, as the teacher noticed. Similarly, most of the participants in the focus group discussion demonstrated interest in tasks such as role plays, and reported their efficiency in helping them utilize the acquired vocabulary terms and structures, and to improve their communication skills. This fact was confirmed in the achievement test through students' oral performance in which they succeeded in transmitting the message with fluency, using the appropriate vocabulary. Finally, introduction of the narrative aspect was a new dimension in teaching English for Pharmacy students at Blida University. In the classroom, it was noted that students were attentive and eager to know about the content of the story; likewise students in the group discussion expressed their enjoyment when listening to or reading a story, stating that it is a fruitful experience.

With regards to the fourth hypothesis, the researcher employed two research tools: the focus group discussion and achievement test, addressed to second year Pharmacy students. The information generated showed that students were satisfied

with their involvement in the action research as it offered them an authentic learning experience through which they could expand their linguistic knowledge. This was represented through their positive attitudes towards development of vocabulary knowledge and reading comprehension. The students' satisfaction with their improvement in reading comprehension process is mainly due to their engagement with the teaching content, incorporating activities for them to practice the required skills to achieve understanding; learners were exposed to different text types, such as, articles and stories, covering a variety of topics. Concerning vocabulary acquisition, the process was facilitated via the introduction of the Latin-Greek approach to teaching lexis, especially with regard to medical terms, thereby help the participants to understand and infer meaning. Moreover, storytelling and role play performance were interesting activities for students to apply use of the acquired vocabulary. The students' responses were confirmed through their positive performance in the achievement test, confirming the previous results. So, in both the reading and the vocabulary sections students performed well. This fact is due to their grasp of reading techniques, particularly their understanding of the writers' message. Furthermore, vocabulary performance was demonstrated through the ability to infer meaning of vocabulary terms and recognize definitions of health-related terms. On the one hand, the students' performance in the achievement test demonstrated a good understanding of the narrative text and high performance of linguistic skills; on the other hand, the role plays in the oral test confirmed an improvement in the sense that they could convert the linguistic knowledge they acquired during the learning experience into communicative abilities. Therefore, the aforementioned data collected by the research tools confirm the fourth hypothesis of the current research, specifying that implementation of a multi-focus syllabus may have a positive impact on Pharmacy students' performance and communication skills.

To conclude, it is worth noting that the previously stated hypotheses are intended to reveal the consequences of the action research. The results obtained from the intervention proved the active engagement of students with the educational content and showed the efficacy of the syllabus in expanding vocabulary acquisition and

promoting reading comprehension from a linguistic to a communicative ability. The findings also demonstrated the contribution of the intervention in helping students improve their communication skills. Therefore, the aforementioned hypotheses of the action research allowed the researcher to gauge the effectiveness of the multi-focus syllabus for Pharmacy students' communication skills.

5.8 Insights into Teaching Communication to Medical Students

After reporting the results generated from teaching the multi-focus syllabus to Pharmacy students, this section seeks to offer suggestions for a better implementation of the multi-focus syllabus in an ESP context to teach English for medical students. The purpose of this section is to provide pedagogical tools pertinent to the medical context. The elements included in this section are intended to improve students' communication at the four levels: reading, writing, speaking and listening, also to facilitate grammar learning and vocabulary acquisition, in particular.

5.8.1 Reader's Response Journal

In order to respond positively to any reading material, students need to gain insights into the text and reveal their comprehension in a communicative atmosphere. Before starting to read the text, students are better introduced to words and grammatical construction in context, for example, through pictures and diagrams. As reading for medical purposes demands a great amount of effort on the part of the students, they are invited to use the "reader's response journal", after the reading session, to show their comprehension. The teacher may introduce students to the use and usefulness of this journal beforehand. In fact, they are reading logs aimed at revealing the learners', thoughts, reactions and questions in regards to the content of the text and any other elements of the lesson. Whenever the text is a story, students will gain understanding through writing their responses and sharing their ideas with their classmates. As they proceed with the events of the story, they can make predictions about what might happen later and prepare questions to ask in class. There

are also some activities which can be useful for engaging students with and responding to literature, such as:

- Retelling the main text components.
- Creating an alternate ending or suggesting a solution.
- Creating a crossword puzzle based on the topic of the text
- Writing a summary of the text

5.8.2 Storytelling: Improvements in Grammatical Accuracy and Lexical Choice

As a powerful tool of human communication, stories could be an important pedagogical means upon which schools and universities might build their curriculum and syllabus planning. Storytelling, as mentioned in the first chapter, has proved to be an efficient strategy to teach English for Specific Purposes. The first parameter to consider in planning for the lesson is to select the appropriate story or adapt it adequately according to the level of the students. The teacher's role is to, make the language input comprehensible by modulating his tone and interacting with the audience (Heathfield, 2011). The instructor needs to motivate his/her students by providing interesting stories on health-related issues, which might also contain lexical items and grammar constructs relevant to the target situation.

Narratives may realize a number of pedagogical purposes in the ESP classroom. Firstly, listening to stories develops the students' concentration rate and subsequently promotes their comprehension skills. When students are exposed to a narrative text and are listening to the teacher recounting the story, they are more likely to remember the text content and develop their listening skills in English. Secondly, the communicative nature of storytelling affords the opportunity for students to interact with their classmates and develop their communication skills to perform well in the target situation, that is, professional and academic settings.

In the Pharmacy context, storytelling does not only help students acquire information the different body systems but also facilitates the assimilation of various notions related to other modules, like Botanical Studies (for example: how seeds grow)

and the history of Pharmacy. Therefore, storytelling can be used to provide support in a relaxed classroom environment, since, “relaxed students learn more easily” (Dulay 1982: 266). Narratives introduce an inductive approach to teach grammar and vocabulary, as asserted by Akbari and Tahririan (2009), who observe that students in an ESP context frequently encounter unknown words in context and they urgently need to adopt some deliberate strategies to facilitate long-term retention. Therefore, through this method, students will generate knowledge of new medical terms and a variety of grammar structures that they will use, in their turn, in other situations.

5.8.3 Group Conversation

Apart from the individual work, there are numerous activities said to work successfully when students cooperate in groups. Medical students have to learn to work efficiently with others in order to perform well in the target situation. When collaborative work is taking place, students work productively and benefit from each other. Group conversations help students generate understandings that they cannot create alone. When working in groups, learners have to share their perceptions and opinions with each other, supporting the development of their level of critical thinking. Group work also helps encourage the incorporation of linguistic knowledge and practice of communicative abilities. This can be perceived through the use of language in different social situations, for instance, in dealing with a patient in a Pharmacy, which requires specific vocabulary and grammar patterns. Also, reflecting upon any activity involving collaboration with their classmates, students are more likely to remember the content in a way that supports construction of their background knowledge

5.8.4 Further Pedagogical Implications

Considering the Algerian context, it is of paramount importance to consider some pedagogical parameters which play an important role in delivering the English course to Pharmacy students, such as classroom management and teaching time load.

5.8.4.1 Classroom Management

Classroom atmosphere reflects quality of learning (Dalton, 1951), therefore it is worthwhile to create a relaxed environment that makes the lesson vivid and the learning process enjoyable, as much as possible. The multi-focus syllabus can be better implemented when the instructor encourages interaction and motivates students to collaborate with each other. It would be better, therefore, if the English teacher could divide the large group of students into two smaller groups to devote more time to individual and group work.

5.8.4.2 Teaching Time Load

The teaching time load contributes immensely to a successful implementation of the multi-focus syllabus in EMP teaching. The researcher highly recommends at least two sessions a week to give students enough exposure to the English language in different contexts so as to enable the learner to become acquainted with different language structures and expressions. This suggestion should be considered by the Ministry of Higher Education, to make regulations concerning teaching English at tertiary level, especially in the EMP context.

5.9 Conclusion

Throughout this chapter the researcher reported and interpreted the data gathered in the action research phase by means of three research instruments: teacher field note, focus group discussion and achievement test. The results obtained by the end of the intervention demonstrate the effectiveness of the multi-focus syllabus on Pharmacy students' ability to communicate in English. Each part of the course taught to second year students represents a layer making up a whole process. Based upon the basic linguistic element, which is terminology, in addition to grammar and language skills, the teacher researcher implemented the multi-focus syllabus aimed at helping students to be able to communicate effectively in English. The results consisted of the considerable progress of students in expanding their vocabulary knowledge, developing their reading comprehension process, and improving students' interaction

and speaking skills. The success of the intervention can be gauged firstly by the evidence gathered by the teacher through observation of students' behavior in the classroom, and, secondly, through students' testimonies and performance in the achievement test.

The second section is designed to equip medical students with the necessary tools to achieve communicative competence in English. It provides teaching techniques and activities, such as reader' response journal and storytelling, that will help students improve their language skills and convert them into communicative abilities. It also sheds light on further recommendations concerning teaching time load and classroom management.

General conclusion

General conclusion

With the development of globalisation, the need to learn the English language has become accentuated because it is a key to international science, technology and commerce, becoming the accepted language of communication in these domains. It should, therefore, be important to stress the role of teaching English to students, or professionals belonging to a specific field, to help them communicate and operate effectively in the target situation, as is the concern of Teaching English for Specific Purposes.

The concept of ESP has developed with its own methodologies which draw on research from applied linguistics and other diverse disciplines. Underlying the teaching practice that is appropriate to a given domain, academic or professional, ESP teaching at university requires the practitioner first to determine students' needs, and then to apply relevant tasks determined by the demands of their educational or employment situation. The present study sets about identifying Pharmacy students' needs, and exploring the teaching situation within the department of Pharmacy at Blida University, in order to develop suggestions for teaching techniques that are more appealing to the students. Alongside this, a suitable syllabus is designed, to allow for a wide range of language components and tasks.

Therefore, the main objectives of the present study were to explore the teaching/learning situation of English in the department of Pharmacy, then conduct a needs analysis among students, teachers and Pharmacists at work so as to develop a multi-focus syllabus that meets the students' needs in their academic and professional career, and help them communicate effectively. Finally, the aim was to use action research to implement the suggested syllabus on second year students' English learning.

To attain these objectives the following research questions were raised

General conclusion

- 1- What are the language components and skills that Pharmacy students most need to develop?
- 2- How can we best improve students' language skills and linguistic knowledge to help them reach effective communication?
- 3- To what extent would a multi-focus ESP syllabus respond to the students' needs and the requirements of the pharmaceutical domain?
- 4- Does the multi-focus syllabus have a positive impact on the development of students' communicative skills?

In this regard, the following research hypotheses are formulated:

- 1) It is important for Pharmacy students to develop their reading and speaking skills and promote their understanding of pharmaceutical terminology.
- 2) Involving students in communicative tasks would best help them expand their linguistic knowledge and foster their language skills to achieve effective communication.
- 3) Designing a multi-focus syllabus would allow a wide array of instructional content and techniques that make students actively involved in the learning process.
- 4) Implementing a multi-focus syllabus may have a positive impact on Pharmacy students' performance and communication skills.

The collected data from this study provided the following conclusions. With regard to the first hypothesis the results drawn from undergraduate and postgraduate students' questionnaire revealed the students' awareness of the importance of English learning. Teachers and pharmacists emphasized on the necessity to communicate in English in academic and professional settings. Moreover, they accentuated the role of reading comprehension in facilitating access to the latest literature on medical topics. With regard to students' lacks the majority do not master well reading and speaking and have difficulty in medical terminology.

General conclusion

Consequently they wanted to improve these skills and develop vocabulary comprehension through skills-based tasks. These results seem to confirm the first hypothesis.

As far as the second hypothesis is concerned, the aforementioned research instruments showed the necessity to implement communicative tasks together with intensive reading practices. Moreover, when students claimed the difficulty of medical terminology, the researcher suggested a Latin and Greek- based instruction upon which Subject Specialists agreed. Furthermore, Subject Specialists highlighted the role of working collaboratively as they put special emphasis on reading activities and communication tasks to foster students' communicative abilities. Yet it is necessary to involve students in communicative tasks to help them develop their linguistic knowledge and communication skills. Therefore, the researcher designed a multi-focus syllabus to help Pharmacy students reach effective communication in English.

Concerning the third hypothesis which specifies that the multi-focus syllabus would allow a wide range of educational tools to make students actively involved in the learning process, the results of the intervention conducted by the researcher, where the syllabus was implemented, demonstrated the students' engagement in the classroom mainly by the use of teaching aids and a variety of interactive tasks. Through field notes, the researcher recorded students' engagement with storytelling and role playing activities. This was asserted by focus group discussion where students showed their satisfaction and enthusiasm about being involved in communication-based tasks.

Considering the fourth research hypothesis, which holds that the multi-focus syllabus may have a positive impact on Pharmacy students' performance and communication skills, the findings showed the students' improvement in reading comprehension due to their involvement in the reading-based tasks. Concerning vocabulary acquisition, it was promoted through Latin- and Greek- based instruction and interactive activities where the researcher encouraged the students to

General conclusion

use the newly acquired terms. Filed notes and focus group results were confirmed through the achievement test. The outcomes revealed the good performance of students in the reading activities and vocabulary section where they demonstrated a good understanding of the narrative text. Through the oral test students demonstrated their abilities to convert linguistic skills and knowledge into communicative abilities.

ESP as a teaching movement is progressing across the world, thus careful attention should be paid to developments in this field. It is recommended that the Ministry of Higher Education give more attention to English language teaching for all disciplines by providing suitable syllabus and training for novice teachers. In relation to the Pharmacy field, it is of paramount importance for students and professionals to address global change and keep up with the latest advancements so as to be able to perform well. Therefore, decision-makers should take prompt steps to address the concern of EMP teaching and look for effective instruction methods to teach ESP at tertiary level, also to introduce the English course across the studies program for all medical students.

When undertaking this work the researcher faced limitations in terms of time constraints, unavailability of the whole group of students, and heterogeneous sample. The English course is delivered to students only in the second semester of the academic year, with only a few sessions, so the researcher had limited time to undertake Needs Analysis as well as to conduct the intervention. Also, not all the members of the group of second year students were present during the intervention, so the concept of generalization may not be applied. Finally, having a mixed-ability class was challenging for the researcher in terms of finding suitable pedagogical tools that meet students' interest and level, since there is some overlap with regard to learning preferences in the group. Further research is recommended to apply the multi-focus syllabus to the first and second year level of the Pharmacy program in order to bring about positive learning outcomes in an EMP context.

General conclusion

To conclude, the present doctoral dissertation has attempted to investigate Pharmacy students' language learning needs to emphasize the role of English in the medical domain, and to highlight the importance of communication in academic and professional settings. It proposed a multi-syllabus approach to help students develop their linguistic knowledge and communicative abilities. It is, therefore, suggested that Algerian universities consider the input from language researchers and practitioners, and adopt or adapt the designed syllabi according to the educational needs of students.

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APPENDICES

APPENDICES

APPENDIX A: Questionnaire for Undergraduate Pharmacy Students

Dear students,

I am currently conducting a study on the English language teaching and learning among Pharmacy students to produce an English syllabus for Pharmaceutical Studies. You are kindly requested to fill in this questionnaire to express your opinions about and expectations from the English language course. Please, use a cross (×) to indicate your chosen option, and specify your answer when necessary.

Thank you for your cooperation.

PS: You may use any language (English, Arabic or French) to answer the questions.

Section one:

1. Age : gender
2. Level: 1st year 2nd year 3rd year
3. Which of the following describes your level of performance in English?
 - a. Low
 - b. Below average
 - c. Average
 - d. Above average
 - e. High
4. Please indicate under what circumstances and how many years you have been studying English
 - a. I studied English in Formal education (secondary school) for..... years/months
 - b. I took an English course at a private school for..... years/ months

Section two:

5. To what extent do you find the English course important to your studies?
 - Not at all important
 - Slightly important
 - Moderately important

APPENDICES

Very important

Extremely important

6. What do you think of the content of the English course? Is it relevant to your domain?

.....
.....
.....
.....

7. Classify the following according to your immediate needs: (1-4)

Reading

Listening

Writing

Speaking

8. What do you think your English lessons should be based on? Why?

General English

Specific English and contexts related to your

studies

.....
.....

9. What do you think would help you most in reading comprehension? Which one is the most important to you? Why?

vocabulary learning

grammar mastery

10. What kind of activities you consider necessary to your academic life? Classify them according to their degree of importance.

a. Reading articles related to pharmacy

b. Understanding video lectures and not taking

c. Writing scientific reports

d. Have conversations on pharmaceutical topics with foreigners

APPENDICES

18. Do you find any difficulty when communicating in English? Yes No
Is it about: pronunciation lack of vocabulary grammar mistakes

Section four:

19. Which skill(s) or language components would you like to learn/ improve? Classify them according to their degree of importance. Why?

reading	<input type="checkbox"/>	pronunciation	<input type="checkbox"/>
speaking	<input type="checkbox"/>	grammar	<input type="checkbox"/>
listening	<input type="checkbox"/>	vocabulary	<input type="checkbox"/>
writing	<input type="checkbox"/>	translation	<input type="checkbox"/>

.....
.....
.....
.....
.....

20. What kind of activities would you prefer?

Speaking-based tasks
Grammar based activities
Filling the gaps with appropriate vocabulary
Paragraph writing

21. When you study English, what is/ are the objective(s) that you want to achieve?

.....
.....

22. Are you satisfied with the current method of teaching English? If not, what do you suggest?

.....

APPENDICES

APPENDIX B: Questionnaire for post-graduate Pharmacy students

Dear students,

I am currently conducting a study on the English language teaching and learning among Pharmacy students to produce an English syllabus for Pharmaceutical Studies. You are kindly requested to fill in this questionnaire to express your opinions about and expectations from the English language course. Please, use a cross (×) to indicate your chosen option, and specify your answer when necessary.

Thank you for your cooperation.

PS: you may use any language (English, Arabic or French) to answer the questions.

Section one:

23. Gender:

24. Level: 1st year 2nd year 3rd year 4th year

• Speciality:

25. Which of the following describes your level of performance in English?

f. Low

g. Below average

h. Average

i. Above average

j. High

26. Please indicate under what circumstances and how many years you have been studying English

c. I studied English in Formal education :

Secondary education: for..... years/months

University for: years/ months

d. I took an English course at a private school for..... years/ months

APPENDICES

Section two:

5. To what extent do you find the English course important to pharmacy studies?

Not at all important

Slightly important

Moderately important

Very important

Extremely important

6. What do you think English lessons for pharmacy students should be based on? Why?

General English

Specific English and contexts related to your

studies

.....
.....

7. What kind of activities you consider necessary to your academic and professional life? Classify them according to their degree of importance.

e. Reading articles related to your specialty

f. Understanding video conferences

g. Be able to take notes when attending conferences or watching video conferences delivered in English

h. Writing scientific reports

i. Have conversations on pharmaceutical topics

Others please specify.....

8. Classify the following according to your **learning needs**: (1-4)

Reading

Listening

Writing

Speaking

APPENDICES

9. What do you think would help you most in reading comprehension? Which one is the most important to you? Why?

vocabulary learning

grammar mastery

.....
.....
.....

Section three:

10. What language skill(s) do you master **most**? Why do you think so?

Speaking

Listening

Writing

Reading

.....
.....
.....

11. How difficult do you find the understanding of medical terminology in English?

Not difficult

Average

Difficult

12. What are the sources you use to learn English?

Books

Magazines

Movies

Documentaries

Online chat

Others specify

13. Do you find any difficulty when communicating in English? Y N

APPENDICES

Is it about: pronunciation lack of vocabulary grammar mistakes

Section four:

14. Which skill(s) or language components would you like to learn/ improve? Classify them according to their degree of importance. Why?

reading	<input type="checkbox"/>	pronunciation	<input type="checkbox"/>
speaking	<input type="checkbox"/>	grammar	<input type="checkbox"/>
listening	<input type="checkbox"/>	vocabulary	<input type="checkbox"/>
writing	<input type="checkbox"/>	translation	<input type="checkbox"/>

.....
.....
.....
.....
.....

15. As a postgraduate student in Pharmacy, what would be your English learning objective(s)?

.....
.....
.....
.....
.....

16. What do you suggest as a method of teaching English for Pharmacy students?

.....
.....
.....
.....
.....

APPENDICES

APPENDIX C: Pharmacists Questionnaire

Dear pharmacists,

I am currently conducting a study on the English language teaching and learning among Pharmacy students to produce an English syllabus for Pharmaceutical Studies. You are kindly requested to fill in this questionnaire to express your opinions and attitudes towards English language learning.

Thank you for your cooperation.

1) What is your profession?

- medical representative
- product manager in the marketing department
- pharmacist at the hospital
- technician pharmacist

2) How do you evaluate your level in English?

- elementary
- pre-intermediate
- intermediate
- upper-intermediate

APPENDICES

- advanced

3) During your university career have you had English classes?

- yes - no

- General - Specific

4) Is communication in English important to your work sector?

.....
.....

5) To what extent is English important with regards to the literature in the pharmacy field?

6) To what extent is English language learning important to Pharmacy students?

- not very important

- not important

- important

- very important

- extremely important

7) What are the language competencies that students need to develop most?

- writing - reading - speaking - listening

8) What is the impact of learning English terminology on the student's academic and professional careers?

APPENDICES

APPENDIX D: Subject specialists' interview

- 1) What is / are your degree/s ?
- 2) What is your status in the Department of Pharmacy ? (teacher, head of department,...)
- 3) What are the modules that you teach? Which level(s)?
- 4) How do you evaluate your level in English?
 - elementary
 - pre-intermediate
 - intermediate
 - upper-intermediate
 - advanced
- 5) During your academic career, have you ever had English classes? General or Medical English?
- 6) To what extent do you find English language learning important for Pharmacy students?
 - not very important
 - not important
 - important
 - very important
 - extremely important
- 7) Is English important with regards to the modules you teach? How?
- 8) Is English important in order to be able to have access to the literature in Pharmacy?
- 9) What are the language competencies that students need to develop most?
 - speaking, listening, reading, writing.
- 10) What are the situations in which students need English?
 - international conferences
 - national conferences

APPENDICES

- research publications
- literature reviews
- others

11) In the work sector, in which domain is English necessary?

- pharmaceutical laboratories
- research centers
- university teaching
- hospitals
- other.....

12) What is the impact of learning English terminology on students' academic and professional life?

13) What do you think about use of a Latin- and Greek-based vocabulary instruction?

14) What are the techniques you suggest to students to help them to acquire medical terminology?

15) Do you have any suggestions concerning English language teaching in the Pharmacy department?

APPENDICES

APPENDIX E: Interview with the English teacher in charge

I am currently conducting a study on the English language teaching and learning among students who are not English majors, but studying on an English as a Foreign Language unit within the Pharmaceutical Studies program. You are kindly requested to answer the following questions to provide me with your opinions with regards to the English language course.

Thank you for your cooperation.

- 1) What are the language skills and sub-skills that Pharmacy students need most for their studies?
- 2) What do you think they like most?
- 3) What are the objectives that you want to achieve by the end of the English course?
- 4) Is there any syllabus or teaching materials provided by the Department, and, if so, is it adequate to their level?
- 5) What kind of activities/ instructional materials do you provide for your students?
- 6) What teaching method/ techniques are you following when delivering an English Lesson?
- 7) What is the role of medical terminology in EFL teaching? And how difficult is the acquisition of medical terms for Pharmacy students?
- 8) What do you think of a Latin-Greek based approach to teaching vocabulary to Pharmacy students?

APPENDICES

APPENDIX F: Classroom Observation Grid

Date:	Poor	Adequate	Good	Comments
Level:				
Educational climate for learning				
Lesson structure and content				
Teaching materials and activities				
Teacher's and students' use of language				
Students' interaction				

APPENDIX G: Achievement Test



Lenny's Journey through the Respiratory System

The respiratory system is the path that air travels through, into the lungs, to the blood and then to the heart. Lenny, an oxygen cell, will be travelling through the blood stream to the rest of the body. He will go through major veins and arteries until he finally arrives at his destination.

It is the first day in my adventure through the body. I was breathed in by a little girl who was jogging outside, through her **nose**. Next was down the trachea, which leads to the **lungs**. Along with other some other oxygen molecules, I was transported down to an alveoli. I passed through its wall and through the wall of a capillary, and finally I was in the blood stream!

As I was going through, I also noticed some carbon dioxide molecules coming into the lungs, which would then be breathed out by the little girl. Bob, A red blood cell picked me up as I passed through the capillary stream. He took me to the heart, which pushed us around the body. The blood cell, whose name was Bob, told me I was to be taken to a cell in the leg, which needed energy to keep the girl jogging. It was his job to drop me off. Bob told me we were travelling through an artery, and he would return through a vein.

I thought this was all very interesting. I parted with Bob at my destination, a cell in the little girl's leg. The cell needed me to produce energy. There was already a **glucose** molecule and some water waiting for me. All I needed to do was join with the glucose and water and we would form energy. We did and... BAM! The cell had energy, and I have been broken into a carbon dioxide molecule!

APPENDICES

Now that the cell had its energy, the blood stream had to quickly transport any carbon dioxide and waste out of the body. I was picked up by another red blood cell, named Sally, who had to take me back to the lungs. I was then swimming through the deoxygenated blood. The girl needed to breathe me out. Suddenly, WOOSH! The girl **exhaled**, and along with other carbon dioxide molecules, I was **swept out** and back into the air.

While the little girl started running, she felt unwell after a moment. So, she stopped suddenly, her breathing was going fast, and tried to find an area to rest. An old woman passed by and asked her: This fact may be a sign that something unhealthy, it can be dehydration. You should drink a lot of water. The little girl replied: No, I think it's heartburn. I feel gastric acids backing up to my throat. The woman advised her to go home and ask for assistance.

1) Reading Activities

A. What does the picture refer to? Circle possible significations.

- Digestive system - exercising – fatty food - healthy lifestyle.

B. circle the right answer

- Lenny was transported by Bob to a cell in the leg because it needed

* Glucose

*Protein

*Energy

- His way back to the air was through

*Artery

*Deoxygenated blood

*Lungs

- Why did the girl suddenly stop running?

APPENDICES

* She felt nauseous

* She was suffering from acid reflux

* She felt sleepy

C. from the text, Choose the right synonym for the following terms

Inhaled= Windpipe=.....

Observed=..... Power=

In poor health=..... Vomit=

D. Fill in the gaps in the following role play with words from the box :

Ache, unwell, indigestion, nausea, having trouble with, pain, unhealthy, fit and well, heartburn

- Doctor: what is your general health like?

- Patient: generally, I'm, but these days I'm my stomach. I haveand a burning feeling in the chest.

-Doctor: how long have you been feeling?

-Patient: about four days

-Doctor: this can be And the fact of vomiting makes you feel because gastric acids are coming up.

-Patient: so, what should I do to get rid of this stomach?

-Doctor: first, I will prescribe to you some medicine to relieve Second, I recommend that you avoidfood. Besides, after eating, stay in an upright position for two to three hours.

APPENDICES

2) Word Study (Lexis)

A. What does the suffix “ose” refer to in the word ‘Glucose’?

.....

It is free or Natural?

State three similar examples from the same type.,

B. Define first the root or suffix then define the word: solidify, clarify, purify , gastric

Root/ Suffix	Meaning	Word	Meaning
-fy		Solidify	
-ic		Gastric	
-ase		Amylase	
peps		Pepsin	

C. Complete the following table with words from the text related to the root ‘pneuma’ and prefix ‘pulmo-’

Pneuma/pulmo			
Adjective	Verb	Function	Noun

D. Give the appropriate terms to these definitions.

-: to run at a leisurely, slow pace, especially as an outdoor exercise
- an abnormal accumulation of body fat
-; the organ inside the body of a person, where urine is stored before it leaves the body.
-: enzyme responsible for digestion
-: the anatomical name for stomach
-: voice box which is responsible for voice generation.

APPENDICES

3) Language Study

A. write the verbs in the correct form

- John was anxious when he entered the examination room. He (take) a deep breath first, and(start) writing.
- Doctors recommend that he(go) home until he finishes his medication in hospital.
- Your classmates are taking an exam. (not disturb).
- (take) one tablet every morning.
- I suggest that you (avoid) sugar rich food to lose weight.
- “What is the matter with you today? You look tired”. “I ‘am.....(have trouble with) my back”.
- deoxygenated blood (contain) carbon dioxide.
- the epiglottis is a tissue that (shut off) the larynx when you..... (swallow)
- (chew) means crushing food into smaller, softer pieces with the teeth so that it can be swallowed. (*Cambridge Dictionary definition*)

B. Write which, who or that.

- Teeth are defined as the hard white objects in the mouth, are used for biting and chewing
- As I inhale air into my nose, contains mucous glands that secrete mucus to humidify the air, it travels down to my throat.
- My nose has tiny hair help filter out dirt, smoke and other nasty particles that need to be removed.
- People suffer from insomnia get tired easily.

APPENDICES

4) LanguageTask

- What is the path of water in the little girl's body? Explain the process briefly.

.....

.....

APPENDICES

APPENDIX H Interview with Subject Specialists (French version)

Interview pour les enseignants de la spécialité

Cher(e) Enseignant(e)

Dans le cadre d'une recherche sur l'enseignement de la langue anglaise et qui a pour objectif de concevoir un programme qui répond aux besoins des étudiants de pharmacie ainsi qu'aux exigences du domaine pharmaceutique. Je vous prie de bien vouloir répondre à ces questions :

1) Vos diplômes et études :

Licence en.....

Magistère en.....

Doctorat en.....

Autre veuillez préciser

.....

2) Quel est Votre statue au département de pharmacie ?:

.....

3) Quels sont les modules que vous enseignez ? pour quelle année ?

.....

.....

.....

.....

4) Comment est ce que vous évaluer votre niveau en langue anglaise ?

Initial

Pré-intermédiaire

Intermédiaire

Avancé

5) Pendant votre parcours universitaire, avez-vous reçu des cours d'anglais ?

Oui

non

Anglais général

anglais pharmaceutique

APPENDICES

Pendant combien de temps ?

.....
.....

6) Est-ce que l'anglais est important par rapport aux modules que vous enseignez ?

Veillez expliquer comment?

.....
.....

7) Jusqu'à quel point vous trouvez l'apprentissage de langue anglaise important pour les étudiants en pharmacie ?

Pas très important

Pas important

Important

Très important

Extrêmement important

8) Quelles sont les compétences que les étudiants doivent développer le plus ?

Expression écrite (writing) expression orale (speaking)

Compréhension écrite (reading) compréhension orale (listening)

9) Quel est l'importance de l'anglais par rapport à la documentation ?

.....
.....
.....

10) Quel est l'impact de l'apprentissage de la Terminologie en Anglais dans le cursus universitaire ainsi que la parcours professionnel du pharmacien ?

.....
.....
.....

APPENDICES

11) Que pensez vous d'employer une approche d'apprentissage du vocabulaire qui est basée sur le latin et le grec ?

.....
.....
.....

12) Selon vous, quels sont les techniques que vous puissiez proposer aux étudiants pour mieux apprendre la langue, surtout pour acquérir les termes scientifiques en anglais ?

.....
.....
.....
.....

13) Quelles sont les situations dans lesquelles l'anglais serai utile pour les étudiants de pharmacie ?

Congres internationaux
Congres nationaux
Publication des recherche
Documentation
Autre veuillez préciser

.....

14) Dans le cadre du travail, dans quel domaine l'anglais serai une nécessité pour le pharmacien ?

Laboratoire pharmaceutique
Centres de recherche
Enseignement à l'université
Pharmacie de l'hôpital
Autres veuillez

préciser.....

APPENDICES

15) Avez-vous des remarques ou suggestions concernant l'enseignement de la langue anglaise au département de pharmacie ?

.....
.....
.....

APPENDICES

APPENDIX I Questionnaire to Post-graduate Students (French version)

Questionnaire pour les étudiants en post-graduation de pharmacie

Cher(e) Etudiant(e)

Dans le cadre d'une recherche sur l'enseignement de la langue anglaise et qui a pour objectif de concevoir un programme qui répond aux besoins des étudiants de pharmacie ainsi qu'aux exigences du domaine pharmaceutique, Je vous prie de bien vouloir compléter ce questionnaire.

Section1 :

1. Spécialité :
2. Année :
3. Comment est ce que vous évaluez votre niveau en anglais

Initial

Pré- Intermédiaire

Intermédiaire

Avancé

4. Veuillez indiquer dans quelles circonstances vous avez appris la langue anglaise et pendant combien de temps.

J'ai pris des cours d'anglais à l'université pendant
mois/année(s)

J'ai pris des cours d'anglais dans une école privé pendant.....
mois/année(s)

APPENDICES

Section2 :

5. Jusqu'à quel point vous trouvez l'apprentissage de la langue anglaise important pour vos études ?

- a. Pas très important
- b. Pas important
- c. Important
- d. Très important
- e. Extrêmement important

6. Selon vous, quelles seront les cours basic pour les étudiants en pharmacie ? pourquoi ?

Cours d'anglais général

cours d'anglais pharmaceutique

.....
.....
.....
.....

7. Quelles sont les conditions ou l'anglais nécessaire ; dans votre parcours universitaire ainsi que dans votre vie professionnelle?

- a. Consulter des articles dans des journaux pharmaceutiques mondiaux
- b. Comprendre des vidéo conférences
- c. Pouvoir prendre des notes lors d'une conférence
- d. Ecrire des rapports
- e. Assister à des congrès internationaux
- f. Tenir une conversation avec des étrangers sur des sujets médicaux
- g. Autre veuillez préciser.....

8. Énumérez les capacités suivantes selon un ordre de priorité et par rapport à votre domaine d'études

- a. Compréhension écrite (reading)
- b. Compréhension orale (listening)
- c. Expression écrite (writing)
- d. Expression orale (speaking)

APPENDICES

9. Pour faciliter la compréhension écrite (reading) , quelle compétence linguistique sera la plus utile ? pourquoi ?

- a. L'apprentissage du vocabulaire b. la maîtrise de la grammaire

.....
.....
.....
.....
.....

Section 3 :

10. Quelles sont les compétences linguistiques que vous maîtrisez le plus ?

- a. Compréhension écrite
b. Compréhension orale
c. Expression écrite
d. Expression orale

11. Jusqu'à quel point pensez-vous que la terminologie médicale en anglais est difficile ?

- a. Pas difficile
b. Moyennement difficile
c. Difficile

12. Quelles sont les références que vous utilisez pour apprendre l'anglais ?

- a. Livres
b. Magazine
c. Online chat
d. Films
e. Documentaires
f. Autre

Veillez préciser

.....

APPENDICES

13. Quand vous communiquez en anglais, avez-vous des difficultés ?

Oui non

Est-ce qu'il s'agit de :

La Prononciation le manque de vocabulaire les fautes
grammaticales

Section 4 :

14. Quels sont les compétences linguistiques que vous voudriez améliorer ? énumérez-les selon un ordre de priorité. Veuillez expliquer pourquoi.

compréhension écrite (Reading)	<input type="checkbox"/>	prononciation	<input type="checkbox"/>
expression orale (Speaking)	<input type="checkbox"/>	grammaire	<input type="checkbox"/>
compréhension orale (Listening)	<input type="checkbox"/>	vocabulaire	<input type="checkbox"/>
Expression écrite (Writing)	<input type="checkbox"/>	traduction	<input type="checkbox"/>

.....
.....
.....
.....
.....

15. Autant que pharmacien, quels seront vos objectifs d'apprentissage de l'anglais ?

.....
.....
.....
.....

16. Quelles techniques/ méthode(s) vous proposez pour enseigner l'anglais aux étudiants de pharmacie ?

.....
.....
.....

ملخص

يهدف هذا البحث إلى تسليط الضوء على الإحتياجات في اللغة الإنجليزية لطلبة الصيدلة بكلية الطب بجامعة سعد دحلب- البليدة. أظهرت الدراسة التحليلية للإحتياجات اللغوية أن التواصل باللغة الإنجليزية له دور بالغ الأهمية في المجال الأكاديمي و العلمي . إضافة لذلك، يحتاج الطلبة إلى تطوير مهارات القراءة و التكلم و تحسين فهم و اكتساب المفردات اللغوية. بناء على هذا، تم تصميم منهاج متعدد الأهداف لطلبة السنة الثانية صيدلة، و تطبيقه اتباعا لأسلوب البحث الإجرائي، و الذي يتضمن مجموعة كبيرة من الوظائف اللغوية، المهارات و المواضيع المندرجة ضمن مهامات و نشاطات متعلقة باحتياجات الطلبة. بينت النتائج التأثير الإيجابي للمنهاج على الحصيللة العلمية و مهارات التواصل للطلبة، كما تبين خلق جو تعليمي ممتع يشرك الطلبة بفعالية في سيرورة التعلم.

الكلمات المفتاحية: انجليزية الصيدلة، دراسة تحليلية لتحديد الإحتياجات، منهاج متعدد الأهداف، مهارات التواصل، أسلوب البحث الإجرائي.

SUMMARY

The purpose of this research project is to shed light on the English language needs of Pharmacy students in the Faculty of Medicine at Saad Dahlab- Blida University. The needs identification and analysis revealed that communication plays a pivotal role in academic and workplace situations. Besides, students particularly need to develop their reading and speaking skills and improve vocabulary comprehension and acquisition. As a consequence, a multi-focus syllabus was designed and implemented, through action research, in the second year class to allow a wide array of functions, skills and topics to be integrated within tasks and activities that are most relevant to students' needs. The Results demonstrate the positive impact of the syllabus on students' learning outcomes and communication skills, as it also creates an enjoyable learning atmosphere where students are actively involved in the learning process.

Key words: English for Pharmacy, Needs Identification and Analysis, Multi-focus Syllabus, Communication skills, Action Research.

RESUME

L'objectif principal de ce projet de recherche est de démontrer les besoins langagiers en Anglais de l'ensemble des étudiants en Pharmacie au sein de la faculté de Médecine à l'université Saad Dahlab- Blida. L'identification et l'analyse des besoins ont démontré que la communication joue un rôle primordial dans le domaine académique et professionnel. Les étudiants ont particulièrement besoin de développer leurs compétences de lecture et parlé et d'améliorer l'acquisition et la compréhension du vocabulaire en Anglais. En conséquence, un programme à objectifs multiples a été conçu et mise en place avec les étudiants de deuxième année, a travers une recherche action, pour permettre l'intégration d'une variété de fonctions, compétences et sujets dans des taches et activités qui seront pertinentes aux besoins des étudiants. Les résultats ont démontré que le programme a eu un impact positif sur les objectifs d'apprentissage et les compétences communicationnelles des participants.

Mots clés : Anglais Pharmaceutique, Analyse et Identification des Besoins, Programme à Objectifs Multiple, Compétences Communicationnelle, Recherche Action.

THESIS SUMMARY

The main concerns of the present research revolve around the identification of Pharmacy students' language needs so as to develop the required language skills and components to reach a communicative outcome. This was carried out by means of a multi-focus syllabus designed to help students achieve this goal. It was later delivered to second year level participants via an action research project, so as to gauge its level of effectiveness. Therefore, the present study comprises two types of research design. Firstly, a case study explores the status of English language teaching within the Department of Pharmacy at Blida University, and subsequently a needs analysis is conducted using the following research tools: questionnaires with first and second year students, postgraduate students, as well as pharmacists working in different sectors; interviews with subject specialists and the English teacher; and, finally, classroom observation conducted amongst first and second year students who have English in their study program. After analyzing the gathered data, it is revealed that communication constitutes a major factor in academic and workplace situations. Besides, students particularly need to develop their reading and speaking skills and improve vocabulary comprehension and acquisition. Consequently, a multi-focus syllabus was designed to allow a wide array of functions, skills and topics to be integrated within tasks and activities that are most relevant to students' needs. The second step in this work involves action research to evaluate the impact of the syllabus content and teaching practice in helping students communicate effectively. In this phase, the above-mentioned syllabus is implemented and taught by the researcher using communication tasks, narratives and role plays as teaching techniques to bring about positive learning outcomes and create an interesting and enjoyable learning atmosphere. Concerning the action research, the researcher adopted three instruments to gather data: an achievement test administered to 15 students, records from the teacher's field notes, and focus group discussion. The main limitations of the study include the time constraints, lack of equipment (such as amplifiers), and student absences or short duration of attendance in the class.

English for Medical Purposes

In the last twenty years, English has become the language of globalization. As it is required in all domains, there has been a growing demand for learning the language and developing the skills required for performing well in academic and workplace situations. For instance, understanding the literature of the particular discipline, or communicating with people in the area of expertise, can be the ultimate goal for a group of students or workers belonging to the same area of specialization.

The medical world is continually progressing, and people, in particular those involved in the field, should undoubtedly be aware of these changes. Pharmacy, as a specialty within the medical domain is constantly evolving in terms of industrial, biological and clinical areas. Through the findings of a semi-structured, informal interview conducted with a group of pharmacists working in different domains (medical representatives, industrial pharmacist, pharmacist as microbiologist, teacher pharmacist and a dispensing chemist), it is necessary to shed light on students' English language needs, as well as to draw conclusions about what an effective design for teaching content and pedagogy might look like, in order to meet these needs and respond to the requirements of the target situation.

Teaching English for Pharmacy

Teaching English at tertiary level is related to the students' area of specialization, which is the concern of ESP - English for Specific Purposes. This field of teaching needs to be student-centred, allowing students to manage their own learning process. The practice of English teaching is governed by a set of approaches, which aim at teaching the language from a variety of perspectives. If we shed light on a communication-oriented language teaching, its major strand centers around the essential belief that if students are involved in communicative tasks and activities, a development of linguistic knowledge and skills to achieve effective communication will take place.

The Algerian educational context encourages English language teaching (ELT) development at all levels, from secondary to higher education. With regard to the department of Pharmacy at Blida University, English is incorporated within the curriculum, but the implementation of an inclusive pedagogical design has not yet taken place. Therefore, the main concern lies in developing an English for Medical Purposes (EMP) course to cope with learners' needs and the requirements of the pharmaceutical domain. Whenever the concerned population reveals the needs, they are providing, "information, which when acted upon, makes courses better adapted to students' needs" (Gardner and Winslow, 1983: 76). It would be of paramount importance, then, to focus on target and learning needs, because many "programme designers have been guilty of focusing too much on the desired end-product, without giving enough thought to the process of achieving it" (Kennedy and Bolitho, 1984).

English for Medical Purposes is regarded as a sub-branch of English for Specific Purposes (see section 1.2.4). English as the language of globalization has become the necessary tool for communication and the main language for all sciences. The use of English in the scientific world is steadily increasing, and most specialized medical literature is published in English (Piquet et al, 1997). Studies conducted among Healthcare professionals (Maher, 1986; Master, 2005) have concluded that English is the international communication vehicle. Medical English covers the language used in all healthcare sectors; Medicine, Dental Medicine, Pharmacy, Obstetrics (Raynova and Trendafilova, 2013) and Nursing care.

This research study is concerned with teaching English for the Pharmacy which is considered as a sub-category of English for medical purposes (Bruton and Wozniak, 2013). Although English for Pharmaceutical Purposes (EPP) exists in the ESP literature (Del Vecchio, 2012; Grabowski, 2015), it is a label which applies to a language course that deals with, "the description of vocabulary and phraseology used across different pharmaceutical text types and genres" (Grabowski, 2015: 209).

Research Objectives

The main objectives of the current research are:

- 1) Designing an ESP syllabus that meets Pharmacy students' needs and helps them communicate effectively in academic and workplace situations;
- 2) Suggesting and trying out new teaching techniques with medical students, such as, role plays, narratives and communicative tasks to energize the language classroom and boost the learning outcomes.
- 3) Improving students' linguistic skills and knowledge through communicative tasks
- 4) Reinforce students' ability to infer meaning from text and acquire medical terminology.

In order to reach these research objectives the study was designed as follows.

Research Design

As a prerequisite for the commencement of any study, a detailed plan should be provided and thoroughly applied. The theoretical basis for any research is referred to as methodology. In this study it refers to, as stated by Burns and Grove (2003:488) as, "the design, setting, sample, methodological limitations, and the data collection and analysis techniques". Therefore, it is of paramount importance to describe the research design followed, the sampling techniques, the data collection and analysis procedure and state any unfavourable conditions encountered in this research.

Depending on the research questions and to test the hypotheses accurately, the researcher has selected two types of design to carry out the study successfully: case study and action research. As far as this research work is concerned, the aim behind the use of a mixed-methods or two different research designs approach, is to provide the required data that will address the different parts of the research questions, since a combination of methods, integrating two forms of data, provides

a more complete understanding of the research problem (Creswell, 2003). Through a mixed-method study, combining a case study with action research, the researcher starts first with the case study, with data from the needs analysis (NA), then conducts action research to use this data as a basis for the follow-up research method, that is, by implementing the suggested course.

Sample Population

The informants who were selected by the researcher consisted of students and teachers of Pharmacy, the English language teacher and pharmacists in the work place. The variation of the sample is based upon the belief that each participant adds to a, “more in-depth, critically informed response-base, with a clearer perception of learning needs and teaching-learning issues”, Crewe, 2011. With regards to the sample size, the purpose is to obtain, “a manageable part of population that supposedly possesses the same qualities as the whole” (Swetnam 2004:42), and the sample should be large enough to represent the entire population. However, the researcher may be compelled by circumstances to include in the study/ investigation only subjects who can be reached. As far as Pharmacy students are concerned, they do not come to the English class frequently and are not available all the time. For this reason, the researcher opted for random sampling and chose 40 students among 250. The sample containing teachers and pharmacy professionals was selected for the reason that they are more likely to be aware of the importance of the English language than the students. The reason behind choosing different samples is to allow for the maximizing of the similarities and the differences of information to be gathered.

The informants selected for the study represent a subset of the target population, that is, the researcher selected, through random sampling, a number of 40 first year, 36 second year and 10 post graduate students in the Department of Pharmacy at the University of Blida to enable inferences about the entire population to be made. All of the students involved in this study attended English classes for 6 years in secondary education. The reason behind selecting first and second year students is due to the fact that both levels study English in the second semester and that second

year students have already had an experience of one semester English in their first year. Also, 10 postgraduate students, enrolled in first and second year Microbiology, Genetics and Biochemistry, have been selected to provide the researcher with pertinent information with regards to the importance of the English language in postgraduate studies. They are also more aware of its necessity in the Pharmacy program as they have already graduated. All the students responded to the questionnaires; however, only undergraduate students participated in the action research, since English classes are assigned only to first and second year students.

Besides students, 10 subject specialists who are teachers in charge of different modules within the department of Pharmacy were randomly chosen to participate in this research study. The informants hold a doctorate degree in Medical Studies and seven of them had already passed the exam and obtained the degree. Among the participants, there are four professors who, aside from teaching at the department of Pharmacy, are head of Microbiology, Biochemistry and Haematology sections in two different hospitals in Blida. They have different teaching experiences that vary from 6 to 26 years. Two teachers are in charge of Analytical Chemistry, whereas the rest teach the following modules: Biochemistry, Physiology, Organic Chemistry, Genetics, Mineral Chemistry, Galenic Pharmacy, Microbiology and Botantics.

There is only one teacher of English in the department of Pharmacy with whom the researcher conducted an interview. Our respondent, who holds a License degree in English Language Studies, has been a part time teacher in the Faculty of Medicine for eight years. He delivers English courses to dental surgery and pharmacy students.

Similarly with subject specialists, the researcher selected 20 pharmacists through stratified random sampling in an attempt to make the sample representative. The sample consists of eight medical sales representatives who work in the following multinational pharmaceutical companies in Algeria: SANOFI1,

1 <http://www.sanofi.com/index.aspx>

BOUCHARA RECORDATI², GSK³ and MSD⁴, where the employees may be confronted with a situation (writing reports, attending conferences, communicating with foreign workers) in which English is needed. Within the same category, that is industrial Pharmacy (as previously explained in this chapter), the researcher chose four technician pharmacists and four product managers working in the marketing department of the same companies. They were selected to see to what extent the English language is needed in the Algerian industrial pharmaceutical context. Also, four clinical pharmacists from two different hospitals in Blida were selected.

Data Collection Instruments

As a mixed-research study, the NIA was firstly conducted to unveil Pharmacy students' needs so as to design an English course accordingly. For this purpose, three research instruments have been used since the multiplicity of data sources establishes the following criteria for the research data: objectivity, reliability and validity (Richards, 2001). Questionnaires were submitted to undergraduate (first year and second year), post graduate Pharmacy students, and pharmacists at their workplace. Also, the researcher conducted a semi-structured interview with the English teacher and subject specialists. Classroom observation was the third instrument to be adopted. The second step in this study is action research which was carried out among second year Pharmacy students, with whom the researcher used field notes, achievement test and focus group discussion with the participants.

The Results

The data collected from students' and pharmacists' questionnaires, and the English teacher and subject specialists' interviews, was to a great extent helpful to the researcher and useful for cross-checking data. It highlighted the importance of English, identifying the students' needs for their academic and professional careers.

² <http://www.recordati.com/>

³ <http://fr.gsk.com/>

⁴ <http://www.msdfrance.com/index.xhtmll>

The aim was to explore students' areas for development, to provide suggestions for strengthening their language abilities, also to determine the language components and skills they most need to attain effective communication in academic and professional settings.

After analyzing and interpreting data, the target needs analysis can be summarized as follows:

- **Necessities:** the need to learn the English language as it is necessary in academic and professional contexts, the importance of Specific English, that is, medical English as well as General English, the necessity to communicate in English in academic and professional situations, and development of reading skills to exploit medical texts.
- **Lacks:** low performance in reading and writing, difficulty in mastering the speaking skills, low mastery of English terminology which makes reading comprehension and communication difficult, the learning atmosphere is not highly engaging.
- **Wants:** improving reading comprehension and speaking skills along with communication through activities such as reading- and speaking-based tasks, in addition to filling-the-gaps with the appropriate vocabulary.

Therefore, the first research hypothesis, pertaining to the importance developing students' reading and speaking skills and promoting their understanding of pharmaceutical terminology, is confirmed

As far as the learning needs are concerned, they can be summarized as follows: implementing communicative tasks together with intensive reading practices; implementing a lexis-based approach to teaching vocabulary; extending the English course throughout the six years of the course and providing the teaching support; text variation; and dealing with academic and professional needs. Thus, the results confirm the second hypothesis, which states, "Involving students in communicative tasks would best help them expand

their linguistic knowledge and foster their language skills to achieve a communicative purpose”.

The needs analysis’ results show the importance of learning English for Pharmacy students and demonstrate the students’ needs in academic and work situations. Following Hutchinson and Waters’ model of needs analysis, target and learning needs have been stated, indicating that students need to be accustomed to situations where English is used. They should practice the language skills especially reading and speaking, and promote vocabulary comprehension, which can be achieved through communicative tasks that will also promote the students’ communicative abilities. Consequently, the data obtained from the research instruments urge the need to design a multi-focus syllabus which allows the integration of the required skills and language components, and offers a wide array of teaching techniques. The syllabus will be implemented through the action research.

The ultimate aim of the course is to equip the students with the necessary skills and linguistic knowledge they need in order to be able to communicate effectively in academic and professional settings. Needs analysis results stipulate that students need to promote their reading and speaking skills as well as to develop vocabulary learning. Communication in English was emphasized, indicating that communicative tasks will be a vehicle to meet these ends.

The course is designed for first and second year Pharmacy students. It is composed of four units, two units for each level. As far as the first year level is concerned, it represents the basis for learning. Therefore, the researcher provided a detailed description of the syllabus containing two units in which essential language elements are provided. Afterwards, an overview of the second year syllabus is provided. Each unit involves sections with special focus on reading, speaking and vocabulary.

With regards to this study, action research offers the opportunity to the researcher to act as a teacher in the language classroom and implement the multi-

focus syllabus. Likewise, it permits trying out new teaching techniques for the purpose of evaluating their effectiveness on Pharmacy students' learning outcomes particularly, but also in terms of communication and making the learning process enjoyable. It is believed that the instructional method plays a pivotal role in boosting the students' learning outcomes. After identifying target needs and learning needs of Pharmacy students at Blida University and designing the syllabus accordingly, the researcher sought to adopt an action research-based strategy to evaluate the effectiveness of the syllabus as well as a number of teaching techniques (narratives, role-play and communication tasks) in developing students' communicative abilities.

The data collected from the participants in the action research through teacher's field notes, focus group discussion and achievement test is intended to highlight to what extent the suggested syllabus helps Pharmacy students be actively involved in the educational content and achieve communication.

The results obtained from the intervention proved the active engagement of students with the educational content and showed the efficacy of the syllabus in expanding vocabulary acquisition and promoting reading comprehension from a linguistic to a communicative ability. The findings also demonstrated the contribution of the intervention in helping students improve their communication skills. Therefore, the aforementioned data collected by the research tools confirm the third and fourth hypotheses of the current research specifying that designing a multi-focus syllabus makes students actively involved in the learning process; and that the implementation of a multi-focus syllabus may have a positive impact on Pharmacy students' performance and communication skills.



NEEDS IDENTIFICATION OF THE ENGLISH LANGUAGE FOR SECOND YEAR PHARMACY STUDENTS AT BLIDA UNIVERSITY: PROMOTING THE READING SKILLS ALONG WITH VOCABULARY DEVELOPMENT

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Teaching English for specific purposes at tertiary level follows certain techniques, and aims at different objectives depending on the students' major. The teaching content has to be adapted according to the students' needs and the requirements of the target situation. In the ESP field, the course design is mainly based on the identification of students' needs. Through establishing this project, we would first determine what type of language knowledge students need to acquire, and then design the course content accordingly. This study has been carried out to identify second year pharmacy students' needs in learning English. More specifically, it addresses the following question: what are the English language needs of second year pharmacy students in Algeria? The sample population consists of 40 undergraduate and 10 postgraduate students who were asked to fill in a questionnaire. The purpose of this research instrument was for the students to demonstrate their perceptions in regards to the learning process and the teaching procedure of the English Language. Also, 10 subject specialists and the English teacher in charge were selected and interviewed by the researchers. The aim of the interview was to explore the teachers' attitudes towards the English language instruction. The findings of the study revealed that students need to develop mostly their reading skills and to reinforce vocabulary acquisition. It is recommended to make use of the resulting students' needs and teacher's perceptions towards English teaching, and suggest suitable classroom practices; such as promoting pharmacy-related vocabulary activities and choosing the appropriate reading material that suits the students' language proficiency level and fosters their interest.

Keywords: Needs analysis, English for Pharmaceutical Purposes (EPP), ESP, Pharmacy students.

Introduction

The importance of the English language all over the world gave birth to the necessity of teaching and learning this language. It has become the most widely used language in all disciplines. The acquisition of English opens the gate to the world market as well as it facilitates communication. Teaching English effectively for non native speakers of English has always been the concern of many educators and researchers. It is therefore of utmost importance to shed light on the teaching and learning processes at tertiary level so as to bring about effective methods and materials in the learning context.

When it comes to teaching the language to non-English major students, it would be interesting to emphasize on the importance of ESP compared to EGP (English for general purposes). As pointed by

Hutchinson and Waters (1987: 53), the difference between ESP and EGP represents “in theory nothing, in practice a great deal”. Unlike General English instruction which deals with general language abilities, the field of ESP is concerned with “teaching and learning specific skills and language needed by particular learners for a particular purpose” (Žufková et al, 2014: 357). Specific English represents a means to an end for learners of different specialties for whom the language is the bridge to the latest news and knowledge in their specialization.

The significance of the study lies on the paramount importance that the English language holds in regards to pharmacy studies; the fact that urges a needs identification project conducted among pharmacy students in Algeria. Since the English language is the gateway to the world of the latest pharmacy related news, it would be necessary for students to develop their understanding of the medical discourse. The teaching of English for Pharmacy students is the concern of ESP. In regards to the status of ESP in Algeria it is still in its early stages. This is due to the lack of teacher training in this field, also to the absence of a major component of ESP- needs analysis, which might be sometimes done by teachers on an intuitive basis.

Although pharmacy students are provided with English lessons within their studies program, the course content does not cover all the language skills and abilities required in a pharmaceutical context. The ministry of Higher Education and Scientific Research provided the department with a broad outline of the course content for any foreign language taught; French or English. The syllabus contains broad concepts; namely, Medical Terminology, Word Etymology, Phonetics and Production, Lexis of Proper Nouns, that the language teacher should explore and plan lessons accordingly. In order to design an adequate English course to this field, needs analysis should be conducted among students of pharmacy and staff members in the pharmacy department so as to determine the different learning demands and the requirements of the target situation.

Literature Review

Theoretical Background to ESP

Since the 1960s there has been a growing interest among second and foreign language educators in defining and interpreting the ESP concept. This distinctive part of TEFL emerged from the status of English as a contemporary lingua franca (Otilia, 2015). ESP involves teaching the language skills and abilities that learners need in a particular context; either in their academic or professional career. As far as pharmacy studies are concerned, this involves skills and specific terminology related to pharmacy. According to Hutchinson and Waters’ definition, “ESP is an approach to language teaching in which all decisions as to content and methods are based on the learner’s reason for learning”(1987:19). In reference to the pharmaceutical domain, it is worthwhile to consider the utility of the English language in the pharmaceutical industry and the area of scientific research.

It is observed that the term English for pharmaceutical purposes has not widely been used in ESP research. Studies conducted so far used the term EMP (English for Medical purposes) to refer to medical studies in general; however, for the pharmaceutical context, it has been reported by Grabowski (2015: 210) that “English language used in different pharmaceutical contexts is rarely referred to as pharmaceutical discourse or English for pharmaceutical purposes” since teaching English to pharmacy studies requires special terminology and contextual expressions used in this domain. English for pharmaceutical purposes is mostly concerned with teaching a specific pharmaceutical register which consists of vocabulary words and sentence patterns related to the pharmaceutical domain (*ibid*). It also deals with skills that pharmacy students need most for their work. In order to explore the required language knowledge for this specialty area, a needs identification project should be carried out with the aim of designing a syllabus appropriate for the students of pharmacy.

Needs Analysis in English for Specific Purposes

Needs analysis, as a major component of ESP, is represented through “the techniques and procedures for collecting information to be used in syllabus design” (Nunan, 1988:13). The data obtained through this process will be the basis to design a language course, as “It is essential that language for specific purpose courses be based on insights into learners' actual language learning needs” (Antic 2007, cited in Ahmadvand et al, 2015). Learners needs must be addressed carefully; taking into consideration learners' subjective needs (Dudly evans and Sn John, 2009) which helps increasing students' motivation and makes them eager to learn the language. Additionally, needs analysis permits to define course objectives, skills needed as well as teaching materials relevant to their area of specialty.

The concept of needs analysis has been given different interpretations over the last decades. With the development of needs analysis models, the ESP researchers' interest shifted from goal-oriented definition of needs (Munby, 1978; Chambers,1980) to process oriented (Widdowson, 1981) as it “focuses on the presentation of language by reference to the means of language and allows the ends to be achieved by the learner by exercising the ability he or she has acquired ” (Garcia Mayo & Nunez Anton, 1995: 84). Goal-oriented needs derive from the target situation and process-oriented needs derive from the learning situation (Dudley-Evans & St. John, 1998) which corresponds to the target and learning needs stated by Hutchinson and waters (1987) granting importance to the process of learning; i.e., the approach to needs analysis adopted by the these researchers caters for the skills and language that learners need to acquire and the method and techniques necessary to achieve the learning objectives and meet the target situation requirements.

Before starting the needs analysis identification, one should consider the variety of perspectives approaching needs analysis. The starting point of the assessment process is suggested to be Present Situation Analysis (Dudley Evans & St.John, 1998). It is considered to diagnose students' language ability at the beginning of the language course. As Richterich and Chancerel (1980) reported, in order to undertake such type of analysis, the ESP practitioner should take information not only from the learner, but also from the academic institution and work place. Also, Target Situation Analysis (TSA) plays a pivotal role in identifying students' needs as it “refers to task and activities learners are/will be using English for target situation” (Rahman 2015: 26). Therefore, if we want to bridge the gap between PSA and TSA we would point to the lacks, or learners' deficiencies(Allwright, 1982; cited in Songhori, 2008) that is known to be “the route to cover from point A to point B” (Songhori, 2008). To take students' perceptions into their learning needs, Allwright identified students' learning needs and classified them into: needs, wants and lacks; the idea which Hutchinson and Waters later (1987) adopted by focusing on the learners' perceptions towards learning and the way they can learn and not relying only on the learning demands of the target situation. This made the process serve a learner-centered approach to teaching ESP.

Methodology

Our Main concern as stated by Hutchinson and Waters is “to ask questions about the target situation and the attitudes towards that situation of various participants in the learning process” (1987:59). This framework has common characteristics with the Munbian model (1987) which includes: the reason why the language is used, language components or skills required, content areas, context and frequency of use. However, this model does not take into consideration students' learning and target needs, and as stated by West (1994) the information obtained is about the learner rather than from the learner. To carry out a thorough needs analysis procedure we shall ask the following questions: What are the language requirements of the department of pharmacy? What are the learning needs of pharmacy students?

Local Environment Description

In the faculty of Medicine at Blida University, the English language is taught as a language unit for two semesters. In the department of pharmacy, first and second year students are provided with English

lessons during the second semester of the academic year. The status of the English language teaching is specifically related to the teacher's and students' attitudes towards the language and their behavior in the learning context, which are shaped by administrative decisions. The educational authorities do not grant the teaching of English its due importance in terms of developing a good curriculum adapted to the field requirements and assigning qualified teachers to instruct the language in the appropriate way. The language teaching is assigned to novice or untrained teachers who came to explore the ESP path without having the prerequisite skills and without demonstrating awareness of content knowledge with pharmacy studies. In regards to the course content, it is retrieved from the Wikis and it lacks variety in topics. Also, what may affect students' motivation to learn English is the low coefficient of the language unit compared to other modules.

Population

The present needs analysis was carried out with different participants. The purpose from using multiple sources is to ensure the validity and reliability of the obtained information. The sample population consisted of three sections; first, 50 second year students who were randomly selected in the department of pharmacy at Blida University. The medium of instruction for pharmaceutical studies in Algeria is French. Besides, they studied English for 6 years in secondary education and they already had an experience of one semester English in their first year. Second, 10 postgraduate students took part in the study. They are enrolled in different fields of specialization (Biochemistry, microbiology, Genetics). These students were previously enrolled in a 6 years undergraduate pharmacy program and had French as a medium of instruction, but did not receive the English course. Also, most of them (7) already had an experience of 1 to 3 years of work in a medical laboratory or pharmaceutical company. Third, 10 subject specialists teaching different modules in the faculty of Medicine were selected. Finally, the English teacher who holds a BA degree in English language also was a participant in the study.

Data Collection Procedure

The data collection process focused on students', teachers' attitudes on the ESP course content and conduct. The researchers followed a needs analysis process so as to unveil the students' target and learning needs in the pharmaceutical context. A questionnaire of 20 items was addressed to second year undergraduate and post- graduate pharmacy students to identify students' needs, wants and lacks in their field. The interview addressed to the language teacher consisted of a set of questions aiming at exploring the current syllabus designed for pharmacy students, the way it is delivered, and investigating the extent to which English is useful for Pharmacy students. The questions addressed to subject specialists deal with the importance of the English language in regards to pharmacy studies and highlight the students' needs in their academic and professional career.

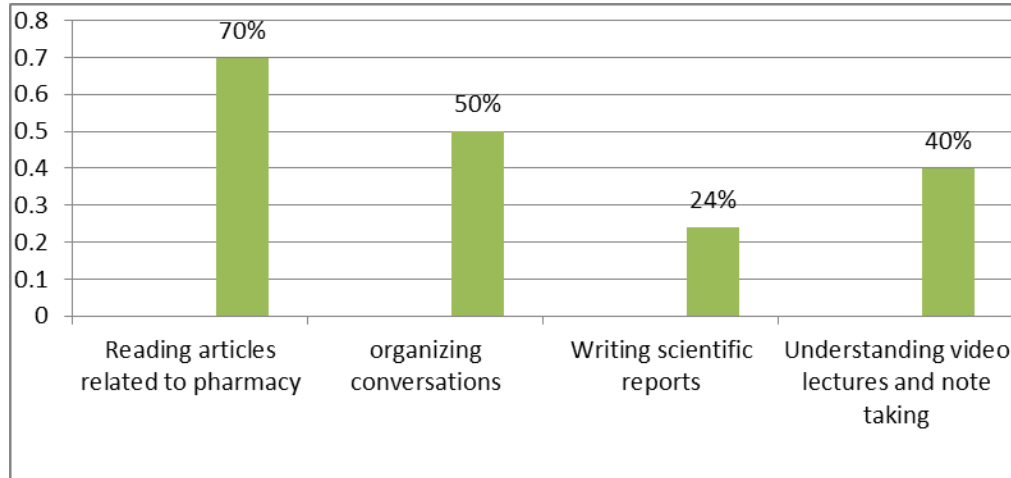
Summary of the Main Results

Questionnaire with undergraduate second year students

1. Importance of English in regards to pharmacy studies and language activities considered as necessary to acquiring the language.

In regards to the importance of English, 10% of the participants consider English as not important or slightly important for pharmacy studies whereas the rest of them (90%) indicated that this language is necessary for their field. The responses varied from moderately important (30%) to very important (50%) and 20% of the students reported that it is extremely important to learn English. The informants were also asked to provide points of view in regards to language activities. The first activity which revolves around

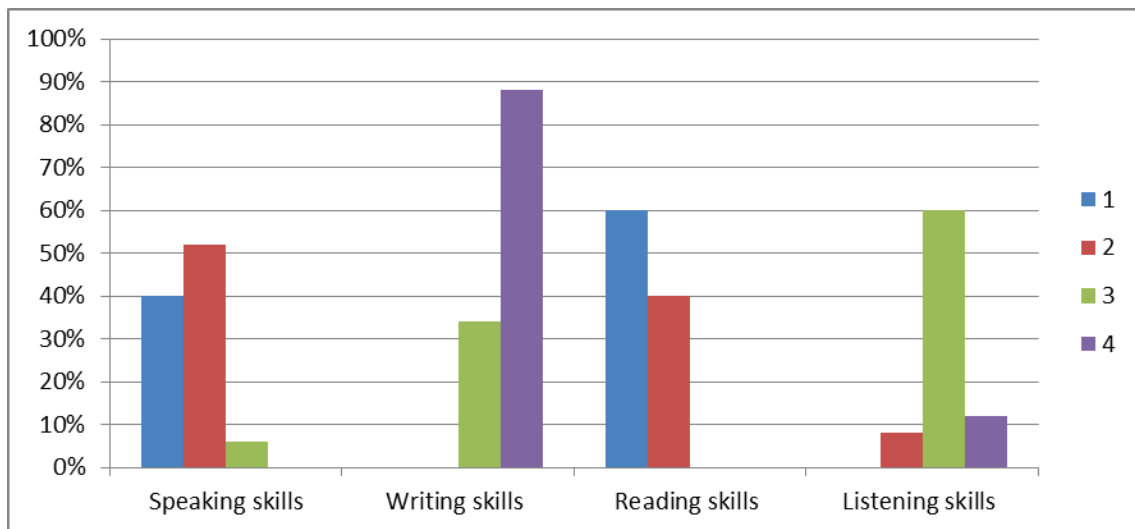
reading comprehension has been chosen by 70% of the participants and ranked as number one among other activities. The respondents (50%) classified at second place activities that revolve around organizing conversations to practise and improve the speaking skills. The following selected activity, by 40% of the informants, is about activities that enable them to understand video lectures and learn how to take note . Writing scientific reports has been ranked number four by 24% of the respondents.



Language activities considered to be important for pharmacy studies

2. Language skills classification according to learning needs

The majority of the students (60%) selected reading as the most needed skill for their studies. In regards to the second selected skill, 52% of the respondents have chosen speaking, and then listening was classified as the third skill followed by writing at final position. The following graph illustrates how students enumerated the language skills according to their needs:



Classification of language skills according to students' needs

3. Elements that are crucial for the reading comprehension and the level of difficulty of medical jargon

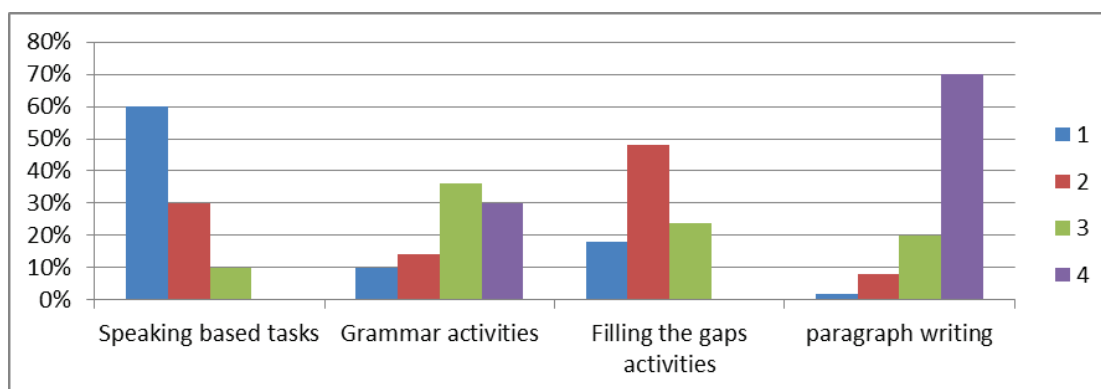
Almost 90% of the students reported that vocabulary is mostly important to the reading comprehension process. They argued that appropriate understanding of vocabulary words helps to reach text comprehension. The rest of the participants (10%) selected grammar mastery as the main element facilitating the reading comprehension process. It is noticeable through the students' responses that for the majority (74%) medical terminology in English is difficult whereas according to 26% of the participants, it is estimated of average difficulty

4. English class attendance frequency, participation and perceptions towards content instruction

It was reported by 60% of the participants that they attend the English class; however, 40% stated the opposite. It appears that Only 30 out of 50 responded to this question. 40% of them sometimes participate in the English class whereas 60% never do. In regards to the English course delivery for pharmacy students, 40% of the informants stated that the lecture's content is constructed by both the teacher and the learner, whereas it was reported by 46% that the teaching content is originally built by the instructor and students are called upon to share and exchange information. Only few students (14%) mentioned that the teaching/learning process lies uniquely upon the teacher's explanation.

5. Students preferences in regards to skills and activities

For this section students were asked to enumerate skills and language components from 1 to 4 according to their preferences. According to the answers, a high number of students (30) emphasized the importance of speaking and reading skills. The listening skills were selected at third place by the majority of students (42) while others (28 students) classified writing as the least important. As far as language tasks are concerned students answers were as follows:



Students' classification of language activities according to their needs

Questionnaire to post graduate students

1. Language skills and abilities necessary for pharmacy students and the difficulty level of medical jargon

The 10 participants emphasized on the reading skills at primary position. Then, oral /aural skills were granted the second place. Only 3 participants allocated the second position to the writing skills. As far as language components are concerned, most students selected the vocabulary and pronunciation at first, then grammar and translation for second and third position respectively. The participants also noted that they find difficulty in understanding the medical jargon which they think makes them unable to comprehend scientific texts.

2. Language activities necessary to pharmacy studies

Students were provided with various language tasks to select the mostly needed for pharmaceutical studies as well as for work situations. The results were as follows:

a) Consulting journal articles	100%
b) Understanding video conferences	60%
c) Taking notes when attending conferences	30%
d) Writing reports	30%
e) Holding conversations on scientific topics	80%

3. Elements that are crucial for reading comprehension

Due to the importance given to the reading skills, the respondents stated that understanding medical terminology facilitates the reading comprehension process. Also, the teacher's selection of the appropriate reading material fosters the students' motivation to learn and improve text accessibility for undergraduate students.

4. Students preferences in regards to skills and activities

In regards to students' preferences, they all agreed on improving the reading skills. 5 participants also showed their interest in improving their speaking skills along with listening. It appears that only 3 participants would like to ameliorate their writing skills.

Interview with the English teacher

1. Teaching objectives

In regards to the teaching objectives, the teacher targets the speaking skills and intends to develop the students' reading ability.

2. Language skills that students master most

The teacher reported that groups are formed with mixed-abilities students. They all have different language capacities. According to his point of view most of second year students have a good level in reading comprehension and do not perform well in writing. As far as speaking skills are concerned, a minority can express themselves easily regardless of syntactic and lexical errors whereas the others do not participate in the classroom.

3. Language components students need for their studies

The respondent indicated that special focus should be put on reading and speaking due to their importance for pharmacy studies. The teacher highlighted the importance of teaching medical terminology to students of pharmacy. He added that it is necessary to make students develop their capacity in acquiring medical terms through different activities since the latter plays a major role in reading comprehension and speech production.

4. Syllabus appropriateness / Method and techniques of teaching

The teacher replied that he follows the competency-based approach in delivering his lessons to pharmacy students; trying to provide students with activities that would trigger their creativity. He also pointed out that there is no syllabus provided by the department. All what he uses as teaching material is basically taken from various online documents related to medical sciences. He stated as an example the Wikis.

Interview with subject specialists

1. Teachers' profile and background knowledge on language learning

The respondents are subject specialists, teaching undergraduate and post-graduate pharmacy students. The subject teachers are holders of degrees in specialized medical studies (DEMS). Only three of them had pursued medical studies and obtained doctorate degree in biochemistry, pharmacology and physiology respectively. As reported, they either studied English in private schools or learnt it on their own. All the informants are experienced and assistant professors in the department of pharmacy and fully aware of students' real needs in regards to English language learning.

The informants are in charge of the following modules: parasitology, toxicology and mycology, chemistry of therapy, food hydro-science, analytical chemistry, mineral chemistry, galenic pharmacy.

2. the importance of English in relation to pharmacy in general and to specific modules in particular

All the informants highlighted the importance of English in reference to pharmacy studies program. Most of them added that all the latest news and the most interesting journal articles are available in English. It is necessary to master the English Language especially when preparing for the lectures since all the latest literature on medical studies is in English. They also pointed out that communication in international conferences academic requires a good mastery of the English language. The teacher in charge of food hydro-science reported that this module was created after a Canadian Anglo-Saxon-school and that English-speaking Canadian territory is mostly known for its advancement in this field. Moreover, the professor who teaches mineral chemistry revealed the importance of English in his area expertise by indicating that in Pharmacy literature, protocols describing chemical experiments are written in English. This makes it necessary for students to master the language.

3. the language skills and components that must be developed

The subject specialists responded positively to improving the reading skills and emphasized on the importance of vocabulary to facilitate the reading comprehension process. The majority of them reported that understanding key words in any document related to pharmacy helps promoting understanding of any reading material. In addition, in order for students to stay up to date with the latest research on pharmaceutical industry, they should learn and understand the different notions recently added to the field. Also most of the participants put an emphasis on oral/ oral skills as students need to communicate in English either during their academic life or future professional career

4. context of English language use

All subject specialists agreed upon the fact that it is necessary for students to learn English since it is needed mostly in the following situations: reading the literature, participating in international conferences or communicating with foreigners. Likewise, pharmacists at workplace need to learn English especially for those who work in pharmaceutical laboratories, research centers and also for those who teach at university.

5. overall suggestions to English language teaching

All the respondents are urging students to learn English. The majority of them reported that English must be included up from the first to the last year of the program of pharmacy studies. They also pointed out the importance of teaching students some techniques that would help them read and understand texts well and suggest group work in making oral presentations so as to enhance the students' communicative competencies.

Discussion

The data collected from students' questionnaires, English teacher and subject specialists' interviews was to a great extent helpful to the researcher. It highlighted the importance of English as it pointed out the students' needs in the pharmaceutical domain. The aim is to explore students' weaknesses to provide a remedy to strengthen their language abilities, to identify the language skills they need most and to measure to what extent they are aware of what they need to do to reach the required English level for a pharmacy student and a pharmacist as well.

Through analyzing the target needs, it is confirmed that undergraduate students show a high interest to the English language and are aware, not to a great extent as post graduate students and teachers, of its utility and importance to the pharmaceutical domain. Also, as stated by subject specialists and post graduate students, it will be beneficial and necessary for students to exploit English texts which involve the latest literature on pharmaceutical topics and maintain conversations on medical topics altogether with a good command of medical jargon needed for this situation. Therefore, the data obtained emphasizes the importance of developing reading and speaking skills together with promoting English terminology for medical studies.

As far as the learning needs are concerned, the undergraduate students demonstrated the need to promote their reading and speaking skills. Communicative tasks would be the appropriate tool to reach this end. Moreover, both teachers and post graduate students recommended intensive reading practices for pharmacy students to ameliorate their reading abilities and acquire information relevant to their field. Students also demonstrated difficulty in understanding medical terms and both subject specialists and the English teacher agreed on the idea of promoting vocabulary acquisition by suggesting a variety of tasks. According to the teachers all skills are important; however, special focus should be put on reading and speaking tasks, and vocabulary activities.

In regards to the teaching of the English language, the data obtained from the teacher's interview show that students do not have an adequate syllabus to their level. The teaching content needs to be adjusted in terms of language skills and language competencies. As the teacher highlighted students' incapacity to express themselves fluently, this may be due to the classroom atmosphere which may not be favorable to students' interaction; consequently, they prefer to keep silent in the classroom. On this basis there should be skills-based activities that would not only enhance reading and speaking skills but also serve as a pedagogical tool meant to increase communication skills and students' motivation to learn. There should also be a particular emphasis on specific terminology to help students build their medical vocabulary, and consequently comprehend any reading material.

General Recommendations

- 1) Implementing the Task-based approach to teaching ESP. this could be done through suggesting a variety of communicative tasks that aim at enhancing the language skills with special emphasis on reading and speaking; for instance, role plays give students the opportunity to practise the speaking skill and acquire new vocabulary terms. Also, creating a workplace setting allows students to simulate real life situations related to their area of specialty.
- 2) Providing English pharmaceutical terminology through filling the gaps activities to help students come into grasp with different topics in the field
- 3) Selecting the right material may improve text accessibility for students, "making things usable and understandable" (Wurman, 1989) which increases the learners' motivation to acquire the language.
- 4) Encouraging ESP teachers to broaden their horizons in the field of specialized studies and create opportunities to students to better monitor their learning. The teacher of ESP must be flexible and open to new approaches and methods (Antic, 2007).
- 5) Diversifying the teaching techniques and tasks to suit students' preferences and learning style.

- 6) Emphasizing the role of oral/aural language in assimilating language knowledge. As it has been advocated by educational psychologists that spoken language, or communicating verbally, has an important impact on language acquisition. That is to say, it helps the learner better internalize the information being received.

Conclusion

The purpose of this article is to portray an image of pharmacy students English language needs. It has shown a needs analysis study conducted among second year pharmacy students, also in which graduate students, subject specialist teachers and the English teacher took part. The work relies on interviews with teachers and questionnaires with students. It was shown that the highest priority, as mentioned by teachers, was given to reading skills and vocabulary development, whereas second year students are more interested in enhancing their speaking skills. In reference to learning and target needs, the overall results indicate that the skills which are needed most for pharmacy students are reading and speaking skills. Finally, it is worth pointing out that the English language learning is indispensable to pharmacy studies, and for better learning achievements, the learning context must be well structured. Students must be given the opportunity to express their perspectives towards the language learning.

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