

VOCABULARY ACQUISITION IN TEACHING LSP. A CASE STUDY APPROACH TO HOW ROMANIAN MEDICAL STUDENTS ACQUIRE FRENCH MEDICAL TERMINOLOGY¹

Olivia-Cristina RUSU (SAMSON)²

Abstract

This paper researches and presents a case study approach to teaching lexical items to facilitate vocabulary acquisition of French for specific purposes. Given a confirmed lack of conventional teaching materials in several domains, the research questions addressed in this study relate to the principles and guidelines for initiating and facilitating foreign languages for specific purposes (LSP) vocabulary learning and to the most effective learning strategies and skills that students use while learning and expanding their LSP vocabulary. The beneficiary target group consists of first-year Romanian students who study Medicine and who have chosen French for Specific Purposes as their second language. Literature and practice have noted a significant deficiency in textbooks and grammar books for Romanian students who want to emigrate to French-speaking countries. Hence, this paper highlights theoretic and practical methods to be considered in terms of teaching French medical vocabulary, based on students' studying predilections.

Keywords: vocabulary acquisition; professional terminology; French for specific purposes; learning strategies.

DOI: 10.24818/SYN/2022/18/2.02

1. Introduction

The study research questions relate to the principles and guidelines for initiating and facilitating LSP (language for specific purposes) vocabulary acquisition and to the most effective learning strategies and skills that students (Ss) use in expanding their LSP vocabulary. These two ideas fall under the following research umbrella question:

What are the most effective strategies and skills used by future professionals for learning, expanding, stocking and activating in the long-term memory the LSP medical vocabulary that determine the best educational practices and activities to be used in teaching LSP language?

¹ This article is based on the dissertation paper "Vocabulary Acquisition in Teaching Languages for Specific Purposes", defended in 2020, the Master's Programme *English Language Education and Research Communication for Business and Economics*, Bucharest University of Economic Studies, Faculty of International Business and Economics.

² Olivia-Cristina Rusu, Bucharest University of Economic Studies, olivia.rusu@rei.ase.ro.

Two implications arise from this main research question (RQ) which tackle the teaching strategies that could be developed and implemented for initiating and facilitating efficient LSP vocabulary learning. A qualitative research method, in the form of an open-question guided interview, is used in order to establish the most efficient types of learning strategies preferred by 1st year students in Medicine for acquiring French medical vocabulary.

The first part of the paper reviews the literature in order to highlight previous research that can strengthen students' confidence when it comes to studying French and acquiring medical vocabulary. The research areas that converge are linguistics, pedagogy and foreign language (FL) learning. The linguistic section contains a brief account of the term vocabulary, its definitions and taxonomies, with direct acquiring implications. The pedagogical inquiry investigates up-to-date research on learning strategies defined through learning styles and on a neuro-linguistic programming (NLP) framework that offers approaches and solutions to "place" new lexical items in the Ss' long-term memory. Also, the importance of second language training with a focus on French as a foreign language is underlined. The second section focuses on the methodological approach chosen for the research, namely, crafting and conducting a guided interview containing open format questions. Furthermore, details on how research data were collected and analyzed are provided. The third section ponders on the findings of the study and offers a number of research implications.

2. Building students' confidence

In the light of contemporary literature, this section reviews the convergence of three research areas. Hence, it briefly defines vocabulary, with an emphasis on vocabulary for specific purposes, then it discusses learning strategies and NLP guidelines in teaching LSP vocabulary, and concisely forays into a number of considerations on French for medical purposes.

2.1 Vocabulary: definitions and taxonomy. LSP vocabulary. Medical vocabulary

The vocabulary of a language refers to the set of lexical units, words or phrases that exist or have been used in a language community. It also refers to a series of terms derived from overlapping lexical layers that resulted from the coexistence of neighboring linguistic communities and from the interaction between languages. Vocabulary can be studied based on two complementary viewpoints - the synchronic approach considers language use at a specific moment in time, and the diachronic approach considers the vocabulary evolution within history. Hence, many words do not exist for most speakers of a language, they are used at some point by a certain group of speakers and may disappear soon after because of lack of use (Giacalone et

al., 2013: 17-8). Within the same lexicon, words establish semantic or formal relationships (e.g. antonymy, eponymy, hyponymy, metonymy, polysemy, synonymy, homonymy, etc.). Specialized vocabulary includes sociolects, idiolects, slang, jargon. Researchers labeled the lexical items of specific language as sociolects, glossary, lexicon, idiolect, or vocabulary for specific purposes. Sociolects are a social dialect, a language variety associated with and used by a specific social group, for a literary genre or in a specific field. Each field of activity, profession, scientific, technical or art branch has its own lexicon, its own terminology (Constantinescu-Dobridor, 1998). In a particular field, as in medicine and surgery, anatomy or biochemistry, for instance, words designating different entities, objects or actions of that discipline are classified under the name of “nomenclature” or “specific terminology”. The focus of the present research is on medical lexis, to determine the most effective learning procedures for vocabulary acquisition in teaching languages for specific purposes. Besides specific lexical items, medical terminology also includes abbreviations, acronyms and eponyms.

Medical terminology eases healthcare communication. A good understanding of medical terminology is important for both healthcare professionals and patients. Medical terminology is used to designate parts of the body, illnesses, medical techniques, procedures and cures, healthcare equipment and tools. It is vital for medical terminology to be understood in order to read and interpret medical records and to assign correct medical treatments. The universality of medical terminology is not merely related to the fact that it is used by doctors, nurses, patients and students alike in diagnosis and treatment. Of Latin and /or Ancient Greek origin, most lexical medical items are similar in different languages, obviously with phonetic, phonic and written alternations. Examples of lexical items and their contextualization in sentences, in Romanian, English and French, include:

Language	Lexical item	Lexical items contextualized in sentences
RO	bronhospasm	Aerul rece și aerul uscat pot provoca <i>bronhospasm</i> .
EN	bronchospasm	Cold air and dry air are likely to provoke <i>bronchospasm</i> .
FR	bronchospasme	L'air froid et l'air sec peuvent provoquer <i>bronchospasme</i> .
RO	calculi calcici	Dacă aveți tendința să formați <i>calculi renali</i> care conțin calciu trebuie să evitați consumul de alimente bogate în oxalați.
EN	calcium stones	If you tend to form <i>calcium stones</i> in your kidneys you must avoid eating foods rich in oxalates.
FR	calculs calciques	Si vous avez tendance à former des <i>calculs rénaux</i> contenant du calcium, vous devez éviter de consommer des aliments riches en oxalates.
RO	calculi biliari	Ecografia este utilă pentru confirmarea <i>calculilor biliari</i> (litiază biliară).
EN	gallstones	An ultrasound is helpful to confirm <i>gallstones</i> .
FR	calculs biliaires	L'échographie est utile pour confirmer les <i>calculs biliaires</i> (lithiase biliaire).

Table 1. Examples of medical lexical items in Romanian, English and French, to show linguistic similarities

Two of the most important linguistic aspects in medical terminology are word formation and pluralization. Word formation means adding a prefix or a suffix to a root word in order to create new lexical items. Mostly of Greek or Latin origin, linguistic algorithms can be established between the meaning of prefixes, suffixes and root words in order to understand a medical linguistic item. For instance, examples from Medical Billing and Coding (2020) related to the root word “*cardio*” - which signifies “heart” - include: (1) by adding the prefix “bradi-”, the meaning is modified. As “brady” signifies “slow”, the medical term “bradycardia” means “a slow heartbeat”: (Fr) *bradicardie*; or by (2) adding the suffix “-ologie” - which means “the study of” -, the meaning is modified into “the study of the heart”: (Fr) *cardiologie*. By memorizing the meaning of word parts, such as roots, prefixes, infixes or suffixes, it becomes easier in time to understand new lexical items, especially, if contextualized. Given their origin, *pluralization forms* follow Latin or Greek rules. Clearly, in some cases, pluralization in French also follows the standard pluralization rules of French. For instance, examples of French words, related to pluralization include: (Fr) *appendice* -> *appendices*; *axilla* -> *axillae*; *antrum* -> *antra*; *coccus* -> *cocci*; *larynx* -> *larynges*; *thorax* -> *thoraces*. Sometimes English forms are also acceptable, as in: (Fr) *condylomes*, *carcinomes*, *léiomyomes*, *fibromes*. For Latin medical terms composed of a noun and an adjective, the two terms are pluralized: (Fr) *lacenta previae* -> *placentae previae*; *verruca vulgaris* -> *verrucae vulgares*. Understanding the etymology and formation of medical lexical items is an imperative stage in acquiring medical vocabulary.

2.2 Language learning strategies and NLP guidelines in LSP acquisition

2.2.1 Definition and purpose of language learning strategies

From an etymological point of view, the word *strategy* derives from the ancient Greek word “strategia”, which means “steps or actions taken for the purpose of winning a war”. The belligerent connotations have disappeared, but the argumentative and goal orientation drive persist in the modern version of the meaning of the word (Oxford, 1990, in Oxford, 2003: 8). Chamot defines learning strategies as procedures that simplify learning tasks. Learning strategies are techniques, actions or steps taken by learners to enhance learning. When referring to FL acquisition, learning strategies imply consciousness and clearly set study objectives, particularly in the opening stages of understanding an unfamiliar language task. Second language learning strategies “are specific behaviors or thought processes that students use to enhance their own L2 learning”. (2005: 112) Factors that influence learning strategies include the context of the study process and the learner’s inner intellectual preferences.

If learners perceive, for example, that a task like vocabulary learning requires correct matching of a new word to its definition within a specified period of time (as in a test), they will likely decide to use a memorization strategy. Their choice of which memorization strategy to use will depend on their understanding of their own learning processes and on which strategies have been successful in the past. (Hsiao, 2004, in Chamot, 2005: 113)

A particular learning strategy can be useful in certain conditions, for specific learning purposes and depends on the learner's study preferences and style. Learning styles are general approaches (either global or analytic, or based upon the VAKOG model) used by learners to acquire knowledge, *i.e.* a new language, or, in our case, vocabulary long-term acquisition. Considered as behavioral patterns, learning styles indicate the most effective general direction towards a worthy hold of knowledge. They depend on the learners' personal characteristics and, according to Oxford, the following aspects are essential: *sensory preferences, personality types, desired degree of generality, and biological differences* (2003: 2). Literature and common sense show that the conscious choice – by both learner and language trainer – of a suitable learning strategy would make learning dynamic, mindful, and focused in terms of purpose. Learning strategies can be classified into six groups: *cognitive, metacognitive, memory-related, compensatory, affective, and social* (*id.*). Oxford suggests four learning styles dimensions, related to students' sensory preferences, personality types, desired degree of generality and biological differences (2003: 3). Learning styles cannot be considered dichotomously, in terms of black or white, present or absent. They commonly function in a continuum connection. For the purpose of our study, only sensory preferences and desired degree of generality are to be taken into consideration, as considered the most relevant.

Sensory preferences can be classified according to the VAKOG framework. They are linked to corporal, perceptual learning channels. On the one hand, visual students prefer visual inputs. Discourses, talks, and oral instructions without visuals might be very unclear for them. Auditory students are at ease without visual stimulation and therefore enjoy and learn from spoken experiences. Kinesthetic and tactile students like movement and enjoy working with tangible objects, overlooking static activities. The guided interview designed for this research tries to determine what the Romanian students' sensory preferences are in terms of acquiring medical vocabulary in a foreign language.

Desired degree of generality is related to whether the learner prefers a holistic or an analytic learning approach. Holistic students like social, communicative interaction. Not having all the information about a topic is not an issue for them, as they can guess the rest from the context. Analytic students are precise and focus on structural (such as grammatical) details: “analytic learners typically do not take the risks necessary for guessing meaning from the context unless they are fairly sure of the accuracy of their guesses”. (Oxford, 2003: 7) It is certain that holistic and analytic

students have a lot to gain if they share learning experiences, as a symmetry between a broad view and a specific interpretation is very useful in SL acquisition. It goes without saying that a strategy on its own is not enough, as it has to be linked to the study context and to the learner's profile. Oxford sustains that a strategy is useful if several conditions are met: (a) the strategy is linked to the SL language activity, (b) the strategy takes into account the student's learning style inclinations, and (c) the learner uses the strategy effectively and associates it with other relevant strategies. Strategies that fulfill these conditions "make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (Oxford, 2003: 8) in order to make students autonomous, lifelong learners. The choice and conjunction of different context-sensitive types of learning strategies determine and enhance positive learning outcomes. Therefore, it is essential for the student to develop an awareness of his / her learning strategies with and under the trainer's assistance and guidance:

By providing a wide range of classroom activities that cater to different learning styles, teachers can help L2 students develop beyond the comfort zone dictated by their natural style preferences. The key is systematically offering a great variety of activities within a learner-centered, communicative approach. (Oxford, 2003: 7)

NLP guidelines in LSP acquisition have been developed by Howard-Jones who states that during a learning process, such as a lesson, there are three stages that should always be present: (1) *engage* – (2) *build* – (3) *consolidate*. Engaging students triggers their attention. Building knowledge means creating long-lasting memories, whereas, during the consolidation phase, the trainer makes sure that this new knowledge may and will be further used in real-life contexts (Hedlund: 2019).

(1) *Engage*. Through the approach-response and the strategy reward, Howard-Jones offers neuro tips and tricks that foster engagement. Thus, on the one hand, engaging the student at the beginning of each lesson (through gamification strategies, for instance) implies both opening a channel of communication and empathy, and creating a link between the trainer and the learner. On the other hand, engaging students is also motivating for trainers, as it has a boomerang effect, being attractive in its own right for the trainer him/herself, raising his/her curiosity about the things that might work. According to Howard-Jones (2014), the motivation teaching approach in educational contexts is linked to the "subcortical structures deep below the cortex in the emotional states that encourage us to attend and learn". The approach response is an incredible tool to engage students. It has a few key elements that should be used during learning sessions. One of these is *novelty* which promotes learners' sense of curiosity, enhancing eagerness to learn and reducing anxiety. It is important for a trainer to surprise, not to shock, his/her learners. Considering students' uniqueness, namely understanding what motivates each and every one of them, also creates and enhances connection. Another element is *plasticity*, as our brains have an incredible capacity of changing their structure continuously, of

creating new neuropathways and connections, once with every new experience. Another method to intensify students' engagement is through the use of a "reward system". Howard-Jones (2014) states that "both engagement and disengagement involve subcortical structures and production of neuromodulators beneath the cortex that influence, in both positive and negative ways, the cortical processes required for learning". Praising, for instance, is a "social reward" that encourages learning and enhances engagement in learning, while building further knowledge and understanding. Strategies of offering rewards include offering students autonomy in solving different tasks, gamification, stimulating discoveries or the use of metacognition (learning how the brain works, constantly and knowingly switching between learning strategies). Hedlung (2019) offers several engagement ideas, such as using online platforms, stories or brain games.

(2) *Build*. Scientific research states that making connections with prior knowledge and reactivating it triggers the "working memory" network (Howard-Jones, 2014). A trainer's task is also to teach students how to apply new knowledge. Hence, s/he should train learners how to convert, systematize and develop the new input based on the prior knowledge they have.

Much educational learning, therefore, requires the type of effortful, conscious processing that activates the so-called 'working memory' network in the brain, as students attempt to control their attention and manipulate the information they are trying to hold in their conscious attention. (Howard-Jones, 2014)

In this stage, the brain's prefrontal regions are activated, together with the working memory network building both knowledge and confidence.

(3) *Consolidate*. The newly acquired knowledge can be easily lost; hence, it needs consolidation in order to become permanent. If new knowledge is practiced it is shifted away "from working memory regions to regions more involved with automatic unconscious processing", allowing the student to learn more. Prior knowledge, also identified as background knowledge, consists of brain networks that already are within the permanent memory. In neuroscience terms, this is called long-term memory. Furthermore, assessing knowledge through controlled or free practice reconstructs the acquired information, whereas retrieving this new information through multiple representations simplifies its future retrieval in different contexts. Hence, difficulties become needed, error-making are desirable and "interleaved practice" (Hedlund, 2019) is a must.

Neuroscience data has been included in this research in order to understand how the networks created by the brain work in order to place lexical knowledge in the learners' permanent (long-term) memory.

2.3 Didactics of second languages training and French as a foreign language

It is a well-known fact that learning a foreign language helps learners build up their problem-solving, cognitive and creative thinking skills, improve their empathy towards diverse cultures, upturn competitiveness in the job market, and enrich their first-language and literacy skills. According to the Ministry of Europe and Foreign Affairs (Ministère de l'Europe et des Affaires Étrangères), more than 300 000 000 people on five continents are speakers of French. French is the second most broadly studied SL after English, and the fifth most widely spoken language in the world. French is rightly considered a language for the international job market. Statistics show that a large number of Medical graduates choose to carry out internships, their residency, to continue their studies or to practice their profession in France or in a French-speaking country (MEAE, 2020). In order to draw their paths towards a better understanding of such a professional environment, the future professional needs to master a wide specific vocabulary package.

3. What strategies work for you?

This second part focuses on the methodological approach I have chosen for my research. According to Chamot (2005: 113) learning strategies can be determined through different self-report procedures and can be associated with observable (e.g. a student taking notes) or unobservable (e.g. a student's selective attention during a lecture) behavior in order to obtain valuable insights as referring to their inward mental processes used while acquiring knowledge. The most suitable tool for my research, in terms of time and quality of answers, was that of a narrative inquiry. More specifically, I used field testimonies, elicited in the form of a guided interview. Although it has its limitations, this method prompts learners to recall their personal learning experiences of LSP vocabulary acquisition in order to truthfully reveal their actual learning strategies preferences and to understand the process of medical vocabulary acquisition.

3.1 Let your students' voices be heard – crafting & conducting a guided interview

Case studies have assumed a strong position in learning and teaching during the last decade and their application in teaching LSP is particularly valuable. The guided interview has been generated out of the overall research question “what are the principles and guidelines for initiating and facilitating LSP vocabulary learning to future professionals?”. To collect learners' personal observations about their own learning experiences, the questions used in the guided interview subtly link LSP literature on vocabulary to a number of basic neuroscience guidelines and to learners' preferred learning strategies and styles. More specifically, the threefold main research objectives were: (1) to elicit students' views on their learning strategies regarding LSP vocabulary; (2) to analyze their learning insights and expectations; and (3) based on their answers, to explore the most useful methodological tools and activities to be used in LSP vocabulary acquisition.

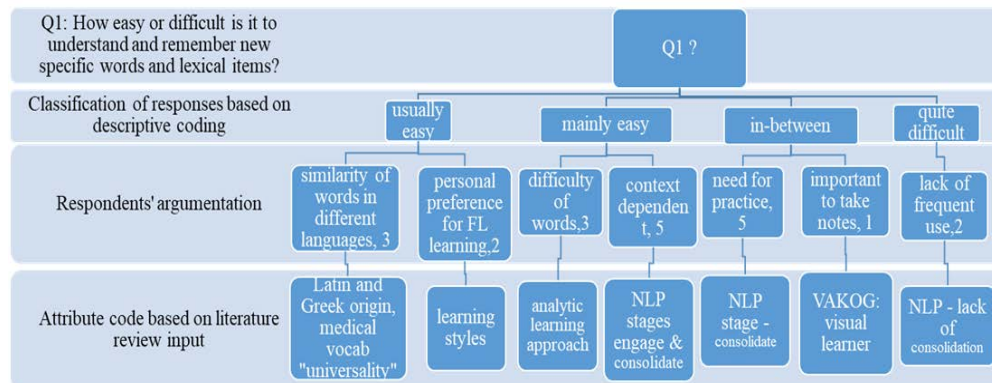
Hence, I crafted a set of 11 questions that I introduced through an overall declaration of purpose, in which students were kindly invited to reflect upon and express their personal learning practices on learning experiences of acquiring French professional vocabulary, in order to develop and improve trainers' in-class strategies. The interview questions were designed following educational objectives that center around learners' expectations [*what is the current situation in vocabulary acquisition and, if necessary, how can it be improved*], efficiency of vocabulary acquisition [*what are the bottlenecks in the vocabulary learning process, if any? What are the methodological and educational steps that can be taken in order to remove those? What has worked for the learners so far?*] and research implications (a theoretical discussion on what other learning strategies can be implemented for an efficient vocabulary acquisition – e.g. online learning activities, or corpus-based approaches to vocabulary acquisition). Consequently, the inquiry deepens and expands upon two questions: (1) How easy or difficult has it been / is it for you to understand and remember new words and phrases? and (2) How do you learn new professional vocabulary?

The target group consisted of 20 first-year students who study General Medicine at “Grigore T. Popa University of Medicine and Pharmacy” in Iași, Romania. They have been selected due to their learning predilection for the French language and culture. The questions were sent via their institutional emails, in a .doc format, during the second semester of their first academic study year. Similarly, the answers were collected via email. If the findings of my research cannot offer a generalized viewpoint on all vocabulary acquisition in LSP study, they can surely suggest hints to challenges and possible methods to be applied and to activities to be proposed. The main aim of the study has been to establish how learners actively learn new professional vocabulary and how easy – or difficult – it is for them to understand and remember new medical words and phrases.

3.2 Listen to what your students have to say

The main purpose of the guided interview was to investigate and capture respondents' own opinions related to the learning strategies they un/consciously use in order to acquire new medical vocabulary. The open questions, with no predetermined and /or suggested answers, have allowed data collection based on respondents' truthful and trustful personal experiences. In order to make data easier to process, I used a simple coding system. Namely, I attached symbols to each respondent: R1, R2, R3, etc., and to each specific aspect of data sets, according to the particular topic and category. This code system helped me filter relevant data and make deductions on the findings in order to create an all-inclusive perspective on the outcomes.

The hierarchy graphic presented in Figure 1 is an illustration of the coding for the Q1 [How easy or difficult is it to understand and remember new specific words and lexical items?]. I classified the responses according to descriptive de/coding. The 20 answers have been grouped into four main response tendencies. The first group consists of five respondents who consider that, usually, it is fairly easy to understand new specific words. Three of them argue their perception with the easiness offered by the similarity of medical vocabulary in different languages, while two respondents attest their personal penchant for foreign language learning. The second group contains eight respondents whose responses can be grouped as “mainly easy”. In their responses, they bring about lexical apprehensions. Three of them mention that it is it depends on how “difficult” a word is for it to be acquired, while other five respondents speak about the importance of the context in understanding the meaning of a word. The “in-between” group comprises six respondents who put forward the idea that it is essential to practice in different contexts in order to acquire new lexical items. One of them states that it is important to take notes. The main aspect that links the 4th group of respondents is that they consider it rather difficult not to understand, but to remember new lexical items because of lack of frequent practice. Should we consider these responses in terms of the literature reviewed above, they would be linked to linguistic aspects (the similarity between lexical medical items goes back to their common Latin and/or Greek origins), to learning styles (the respondents who mention that it is important to take notes are visual and kinesthetic learners), whereas the acknowledgment for practice necessity confirms the NLP stage of consolidation.



(Q1, R7) *In order to be able to remember all the specific terms, I have to learn them, to use them in direct speech. I try to do it as often as I can so that I can easily remember them when needed.*"

Figure 1. Methodology - personal example of coding

4. Contextualize and visualize the new words

This section focuses on the analysis and findings of the collected data, namely on the research output and findings. It is structured based on the topic of the question of the guided interview and the findings have been divided based on the main subject they tackle. A shortcoming of the interview is that it lacks questions regarding biographic information that would have offered a clearer perspective on the respondents' linguistic background.

The first set of questions sets out the respondents' general perspective and is centered on their personal experiences. Hence, the first question refers to the students' easiness and / or difficulty in understanding and remembering new specific words and lexical items. Q1 aims to underline the overall linguistic preferences, needs and challenges. As shown above, responses are divided into four main directions. Q2 [*Do you understand better the meaning of a word if you know its "story" (what language it comes from, how it was formed, what prefix or suffix forms it, what family of words it has)?*] deepens the general perspective and opens up the respondents' linguistic concerns. It argues whether the "story" of a word helps learners at better memorize it. The phrase "story of the word" refers to the language it derives from, to its formation, in terms of prefixes or suffixes, and to its lexical family. Six respondents state that they do not consider it necessary to find out the origin of the word. Eleven respondents have a more holistic perspective and have given enthusiastic answers related to the importance of the context in which the word is used. Word formation, they say, greatly facilitates the understanding of the meaning and it becomes easier to cement that meaning in the memory, without "learning it by heart" (R6). They state that making connections with previous knowledge they already have, and using mnemonic devices help them better remember. It was interesting to observe from the responses that without knowing about NLP, most respondents have a strong insight into its concepts. R9 offers an interesting response, warning that without detailed research it is possible to confuse the meaning and that one should take into consideration the exact and actual context in which the word was used.

The second set of questions tackles the importance of the relationships between words in acquiring vocabulary. Thus, Q3 brings up associations between words and it asks students whether knowing the meaning of synonyms, antonyms, homonyms of medical vocabulary items are of help in acquiring new words and phrases. Except for three respondents, all answers associate understanding with analogy creation and with connections to previous knowledge. They consider that enrichment of vocabulary is easier when there already is a database of words to associate the new word with, especially if linguistic items are structurally similar. R10 offers a thought-provoking answer stating that s/he would lose interest in the word if s/he knew linguistic details about it. Nevertheless, s/he considers that finding that item in different texts would ease its acquisition. Q4 brings up students' reliability on translations, dictionaries and glossaries when looking up the meaning of a specific

word or phrase. All respondents rely on – mostly online - dictionaries when they come across a new word in the medical field, to “save time”. R3 and R15 also look for contexts where the word is used, as this makes it easier for them to use it in the future. R1 states that if s/he needs the translation of only one word, “a quick search on Google translate is very efficient”. Interestingly enough, without knowing R1’s response, R2 “continues” this idea by asserting that if s/he has to understand “longer expressions, “first I tend to rely on a Google translation in English, not in French, as Google translates better in English”. The next question (Q5) specifically asks whether glossaries are of help in acquiring new medical words. This question is extremely important for an already planned follow-up activity to this research, namely crafting a specific educational instrument, namely a glossary. Three directions emerge from the responses. The first one is related to the idea that – especially online - glossaries with medical terms help a lot to get out of a situation when a fast translation is needed (12 respondents). Five respondents have never used glossaries; hence, they do not consider them necessary. Three of them have not used glossaries but consider them useful in enriching vocabulary. An intriguing answer (R18) states clearly that it depends on the learner’s personal learning style and that s/he finds most useful the use of pictures and images. R20 observes that information found online is much more easily forgotten than that found in books. Particular words habitually juxtapose with other words with a high frequency. These word juxtapositions are termed collocations. Q6 inquires whether a student can better memorize new lexical items if s/he understands what word goes with another one, side by side. Most respondents consider that the study of word combinations is an effective way to memorize and to acquire professional vocabulary, respectively. According to R2 and R17 professional vocabulary is much easier to be acquired when the learner studies collocations because they consist of already known words and because they are formed through “efficient associations” (R14). R12 notices that s/he doesn’t think having used collocations in French but “they have definitely helped me in learning English”. Six respondents assert that they doubt that the study of collocations can be of help because they might be even more difficult to understand than the word itself.

The third set of questions directly tackles the context level, although the importance of context has already been stated in numerous responses to other questions. Accordingly, Q7 questions the importance of the context/s in which a new word appears in understanding the lexical meaning. [*Is it challenging to find more contexts in which a word or a phrase appears? Could context understanding be a solution to better remember new professional terms?*] On the one hand, the general opinion of 17 respondents is that multiple contexts in which a new word can be found make linguistic acquisition easier. For instance, for R8, if the context is missing, s/he invents a new one. Similarly, R17 resumes the general opinion by stating that:

generally, when I read a text at first sight and there are new words, I translate them according to the context in which they are, so I understand more quickly the meaning

of the word. Having contact with more contexts in which a medical word can be used would improve, in my opinion, the ability to remember.

On the other hand, R10 admits the benefits of contexts, but advises that in a professional – medical – setting it can be very dangerous to “assume” knowledge, as misunderstanding or omission may be “at the price of a person’s life”. New words can also be contextualized through the understanding of the medical concept it expresses. Q8 discusses whether the students like trying to understand the concepts expressed by the new lexical items specific to their profession. Nineteen brief and clear yes-answers support the general idea that respondents consider that trying to understand medical procedures and processes is useful and challenging. For instance, R1 analytically states that s/he likes mastering a wide range of data (including lexical data) which is related to his/her future profession. A second response (R6) also tackles their future profession and asserts the need of knowing French for the possibility of working in a French-speaking country: “Certainly I consider that the strong base that I have now will help me enormously if I choose to carry out my activity in countries where French language is a priority.” Another question that links learning strategies to sensory preferences brings into discussion word contextualization through visuals. Namely, Q9 refers to the use of visual elements in the educational process of acquiring medical vocabulary. To be precise, it investigates if the use of images, sketches, or diagrams of specific medical words and / or phrases can be of help in acquiring new professional vocabulary. Except for R10 (who concisely answers “not necessarily”), all respondents’ answers prove their conscious visual sensory preference. Ten responses overtly use terms such as “visual memory” and “visual links” and explicitly express that most students in medicine “have visual memory” and that images are essential key factors in the medical field to store up information in the long-term memory. Other nine responses highlight that images are of help in memorizing medical items, such as various medical conditions, and R13 also links diagrams, images, tables, sketches to the importance of the context.

The last two questions (Q10 & Q11) refer to respondents’ previous, current and future personal learning experiences. Q10 refers to students’ personal learning experience and to the educational methods that their FL teachers have used that had a long-term effect on storing new FL words. Most efficient teaching techniques used by respondents’ former FL teachers highlight the importance of constant contact with and exposure to the target language and of persistent practice through a complex array of activities that favor visual, listening and communication tasks. All personal experiences reflect respondents’ matured and aware mindset. R1, for instance, values the importance of native speaker trainers and music in language learning. S/he also recommends reading, as an engaging and consolidating learning activity. R4 shows auditory sensory preferences as s/he recommends as the most efficient method of FL acquisition a holistic approach - the use of conversation. R6 shows a predilection towards visuals and discourse in the form of story-telling. R9 recommends the use

of handouts, spreadsheets with vocabulary and grammar exercises (as “grammar is a must” s/he says), along with developing “the habit of reading”. R11 emphasizes that the more an FL teacher repeated an item in various contexts, the better s/he remembered it. Eight respondents highlight the importance of the use of music during FL classes. For instance, R11 pleasantly conveys this suggestion in the following response: *“My high school French teacher, I think, did a very good job. She had quite a few ways to make sure we understood and remembered. First, we would read a text, then we would translate it, write the unknown words on the board and also their translation, then we would read it once, erase the board, and each one of us would say a word that he would remember. Then we would make sentences and then dialogues. The teacher also used songs in French. The same algorithm as before, but I would also sing and learn the lyrics.”* The last question (Q11) asks students of their personal opinion related to the most suitable learning strategies for themselves [*How do they think they can best remember new specific words and phrases from their field of study?*] The wisest response to this question is offered by R13. S/he puts forward the idea that each learning method is neither good nor bad, but context-dependent and that a learner should discover the most suitable learning strategy by him/herself: *“As mentioned at the previous question, I think that searching professional words in various contexts such as the use of glossaries and professional texts has helped me so far to enrich my French vocabulary. But as we should never stop learning something, I think we always need to find out what method we need to use in any way to accumulate knowledge. Considering that a method is not worse than another, you just have to want to discover new things and to want to evolve in any field.”*

The RQ implications that may arise from my research put forward teaching strategies and activities that could be developed and implemented for initiating and facilitating an efficient LSP vocabulary learning, privileging medical lexicon contextualization and visualization.

5. Conclusions and further research prospects

The whole approach of this research is interdisciplinary, combining acquisitions from linguistics, teaching theories and neuro-linguistic programming, with the main purpose of finding out and establishing how learners actively learn new professional medical vocabulary and how easy – or difficult – it is for them to understand and remember new words and phrases in the particular context of acquiring French medical terminology. The literature review has a threefold course. The first one defines vocabulary and vocabulary for specific purposes, with a specific reference to medical vocabulary. The second part includes a foray into useful learning strategies, followed by a conceptualization and a contextualization of neuro-linguistic programming (NLP), from an educational perspective, centered around the “engage – build – consolidate” formula. The build and consolidate stages have to do with memory, therefore, the question that arose was how to use the NLP framework

to “place” new lexical items in the Ss' long-term memory. Considering educational practices in scientific terms and understanding how the brain works while acquiring new information fosters new knowledge acquisition. A brief incursion into the didactics of languages and French as a foreign language helps build a summative view on the dynamics of acquiring French in terms of learning challenges. Based on the study of literature and of the guided interview findings, the most efficient learning strategies for medical vocabulary acquisition are related to the need for self-regulatory, autonomous and constant practice, which confirms the “consolidation” NLP stage. Medical students’ preference for visual educational material is a patent result linked to the VAKOG sensory styles and to the importance of exposure to a multitude of contexts in which a new lexical item is to be found. Further implications of this research consist of choosing and designing practical in-class activities based on the qualitative outcomes of the questionnaire in order to provide various examples of teaching practices. Moreover, further significant research on vocabulary acquisition that would foster the development of students’ autonomous learning abilities is to be carried out on the relevance of using medical corpus-based approaches.

References and bibliography

- Chamot, A. U.** 2005. “Language Learning Strategy Instruction: Current Issues and Research”, in *Annual Review of Applied Linguistics*, 25: 112–130, New York: Cambridge University Press.
- Constantinescu-Dobridor, G.** 1998. *Dicționar de termeni lingvistici*, București: Teora.
- Giacalone R. A., Mauri, C. and P. Molinelli (eds.).** 2013. *Synchrony and Diachrony: A dynamic interface*, Philadelphia, Pennsylvania: John Benjamins North America.
- Hedlund, A.** 2019. *Classroom Strategies Based on the Science of Learning*, Retrieved from https://www.youtube.com/watch?v=FvPOefaEHk4&feature=youtu.be&fbclid=IwAR0Lz8gr6VOjx3fMVj2gVrN7I_GvAtUuW8qG7ylW1o8A17-pL1d_3y7Ci-g. Accessed on 3 June 2020.
- Howard P., Ioannou K., Bailey R., Prior J. and T. Jay.** 2014. “Applying the Science of Learning in the Classroom” in *Impact*, Retrieved from <https://impact.chartered.college/article/howard-jones-applying-science-learning-classroom/>. Accessed on 10 June 2020.
- Hsiao, T.-Y.** 2004. “Testing a social psychological model of strategy use with students of English as a foreign language”, in *Psychological Reports*, 95: 1059-1071.
- Oxford, R.** 1990. *Language Learning Styles and Strategies: What Every Teacher Should Know*, Boston: Heinle & Heinle Publishers.
- Oxford, R.** 2003. “Language Learning Strategies: An Overview”, in *GALA*, 2003: 1-25.

- *** “10 good reasons to learn French”, Ministère de l’Europe et des affaires étrangères (MEAE), Retrieved from <https://www.diplomatie.gouv.fr/en/french-foreign-policy/francophony-and-the-french-language/learning-and-teaching-french/article/10-good-reasons-for-learning>. Accessed on June 11, 2022.
- *** “Medical Billing and Coding”, Retrieved from <https://www.medicalbillingandmedicalcoding.com/medicalterminology.html>. Accessed on June 23, 2022.

The author

Olivia-Cristina Rusu (Samson) graduated the Faculty of Letters, at “Babeş-Bolyai” University of Cluj-Napoca, Romania. She obtained her Master’s Degree in Francophone Literature from “Babeş-Bolyai” University of Cluj-Napoca, Romania, “Haute-Alsace” University of Mulhouse and “Marc Bloch” University of Strasbourg, France. She earned a Summa cum Laude PhD in Philology, Linguistics, at the Faculty of Letters of “Alexandru Ioan Cuza” University, Iași. Currently, she is a lecturer at the Bucharest University of Economic Studies, where she teaches French and English for specific purposes. Her research interests include teaching foreign languages for specific purposes, linguistics, translation studies, pragmatics.