LANGUAGE LEARNER MOTIVATION AND STRATEGIES IN ENGLISH FOR MEDICAL PURPOSES

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Abstract The present study investigates university students' motivation and learning strategies in an English for Medical Purposes (EMP) context. This research paper establishes a quantitative framework for exploring students' intrinsic and extrinsic motivation to learn EMP. The aim of this study was to analyse if motivation shapes the learning behaviours and influences students' participation in the English classes and in tasks outside the class. The article presents the data obtained and constitutes a first step in determining the most effective way of elaborating teaching strategies for improving the language competences of the medical students.

Keywords Intrinsic Motivation, Extrinsic Motivation, Learning Strategies, English for Special Purposes, English for Medical Purposes.

1. Introduction

Learning English for Medical Purposes (EMP) requires a catalyst which is a fundamental factor in the acquiring process: motivation. The need to investigate the various motivating factors has gained a pressing importance on what we may call the academic market. In the field of second language acquisition, motivation has grown into a notably fertile research area, allowing teachers to rely on the students' subjective needs when adjusting their curriculum.

Since motivation has been perceived by the researchers as the main driving force which shapes performance,² it was necessary to study to what extent motivation determines language acquisition. As the main objective of this research paper regards the improvement of the EMP courses, I elaborated some working hypotheses which were to be validated or invalidated, underlying a questionnaire

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¹ Zoltan Dörnyei, *Teaching and researching motivation*, (Harlow: Pearson Education Limited, 2001), 18.

² Zoltan Dörnyei, *The Psychology of the Language Learner. Individual Differences in Second Language Acquisition* (Mahwah: Lawrence Erlbaum Associates, 2005), 110-111.

that I applied to the medical students. These hypotheses stemmed from empirical observations made during my professional practice as an EMP teacher at the Faculty of Medicine over the last years, as well as from theories found in the relevant literature in the field. The hypotheses to be tested were that medical students are mostly interested in acquiring specialised vocabulary and language skills required by the medical setting (elements of extrinsic motivation); high scores on motivation are consistent with higher performance and with higher scores on learning strategies. The key questions to be answered were: Which type of motivation do students show? How can a teacher increase the student's motivation? What is (if any) the correlation between the motivation level and the use of learning strategies?

To answer these questions, I set a quantitative framework aiming at assessing these aspects by means of a questionnaire applied to first- and second-year students majoring in four specialisations (General Medicine, General Nursing, Balneo-Physio-Kinesiotherapy and Recuperation, and Clinical Laboratory) at the *Transilvania* University of Brasov, Faculty of Medicine. The answers obtained provided helpful information for the ensuing research.

2. Literature review

a. Motivation

Academic motivation was defined as a psychological mechanism which generates the need and desire to learn a second language³. It is this mechanism that gives rise to the learning behaviours which allow the students to maintain their focus and to make use of different learning strategies. The online Cambridge Dictionary defines motivation as the "willingness to do something, or something that causes such willingness,⁴" thus distinguishing the "reason for" from "the reason behind" an attitude, an action, etc. Accordant to this distinction, the Self-Determination Theory developed by Deci and Ryan⁵ identifies and describes different types of motivation in correlation to various rationales and goals. The theory differentiates between intrinsic and extrinsic motivation: the former designates the enthusiasm and willingness to engage in any form of activity because it is personally rewarding, whereas the latter resides in external factors and rewards which are not fundamentally associated to that specific activity. According to Walker, Greene, &

³ Françoise Raby, "A triangular approach to motivation in Computer Assisted Autonomous Language Learning (CAALL)," *ReCALL*, 19, no.2, (May 2007): 185.

https://doi.org/10.1017/S0958344007000626

⁴ "Motivation," Online Cambridge Dictionary. Cambridge University Press, accessed December 20, 2019, https://dictionary.cambridge.org/dictionary/english/motivation

⁵ Edward L. Deci, and Richard M. Ryan, *Handbook of self-determination research* (Rochester: The University of Rochester Press, 2002).

Mansell,⁶ it is the intrinsic motivation which leads to more effective cognitive engagement and self-assessment.

The dichotomous doctrine of intrinsic / extrinsic motivation has a correspondent in the earlier theory developed by Gardner & Lambert,7 who emphasised the pre-eminence of motivation over talent. They developed the bipartite model of instrumental / integrative motivation. According to this theory, motivation can be triggered by two factors - designated as "attitude" and "orientation". The attitude was defined as a set of socio-cultural beliefs and representations regarding the second language (L2) speaking community, while the orientation refers to the utilitarian aspect of the language, specifically to the communication needs – integrative or instrumental. It is mainly the cultural interest that dictates the need for integration in the respective community, while the professional interest leads to the instrumental motivation: the acquired language becomes a tool, a means for acquiring or transmitting knowledge through this language. But the difficulty resides in the fact that motivation can become a fluid notion, when described or evaluated according to a rigid category system. The most problematic aspect is the difficulty to objectively measure and assess motivation, as it is a "hypothetical and abstract concept,8" observable mainly through mediated methods. Motivation is that psychological element that will determine the student's involvement in the EMP learning process, according to two reference points: the direction (what the students is trying to achieve) and the dimension (the time and effort he/she will devote to this endeavour). Motivation is, however, one of the manifold factors (among curiosity, language learning aptitude, time and affective availability, consistency, etc.) that can influence the language acquisition process.

With reference to intrinsic motivation, we distinguish between cognitive-integrative motivation (desire to know, curiosity, language being a gateway to a culture / civilization more or less familiar, but enchanting) or affective (pleasure, feeling of reward). Correspondingly, extrinsic-instrumental motivation can be manifested cognitively (students need to ensure their successful participation in internships, workshops, research projects, they need to work in the medical field using English), but also emotionally (students might be afraid of getting bad grades, they might want to get a scholarship, they might like/dislike the teacher, etc.). But

⁶ Christopher O. Walker, Barbara A. Greene, and Robert A. Mansell, "Identification with academics, intrinsic / extrinsic motivation, and self-efficacy as predictors of cognitive engagement," *Learning and Individual Differences* 16, no.1. (December 2006): 4.

DOI: 10.1016/j.lindif.2005.06.004

⁷ Robert C. Gardner, and Wallace E. Lambert, *Attitudes and Motivation in Second Language Learning*, (Rowley, MA: Newbury House Publishers, 1972).

⁸ Zoltan Dörnyei, and Ema Ushioda, *Teaching and researching motivation* (Harlow: Pearson Education, 2011), 4.

this demarcation can prove quite precarious: what we might interpret as extrinsic-instrumental motivation could be, in fact, read as intrinsic motivation by some learners.

Considering the prominence of vocational education and the fact that globalisation has turned the English language into the lingua franca of the international communication, of scientific research and professional interaction, the approach to teaching English has been increasingly shaped by practical purposes.⁹ EMP should focus, therefore, on the pragmatic aspects of the medical profession: specific terminology, use of professional literature, communication with the medical community and with patients, writing medical records and scientific articles, etc. These are all elements which indicate towards extrinsic motivation in language acquisition. However, despite the time restraints, the medical students with whom I work are passionate about their field of study, they participate in volunteer projects and workshops, they organise scientific communication sessions and awareness campaigns on medical topics. All these activities and interests enhance the role of EMP – far from being a sheer instrument, it becomes an indispensable component of their activity. Their passion extends to assimilate this linguistic component - they read articles, watch films and participate in debates in English and the reward is the activity itself.

Numerous research studies have recently focused on academic motivation in university students. It has been shown that intrinsic motivation tends to be higher during university studies than in previous educational stages. ¹⁰ But these high scores can also be correlated with the psychological needs described by the self-determination model: relatedness, competence and autonomy. ¹¹ Relatedness is the feeling of belonging to a community with whom the individual shares common values and medical students form a discourse community, using the language as a way to show their inclusion in that group ¹². It is also the case of the Romanian students in the Faculty of Medicine who very often use the English language to communicate with each other. Competence refers to the feeling of efficacy and impact on others, and the autonomy represents the ability to act according to one's own interest, to choose and implement one's own choices.

By their nature and structure, universities in general, and the Faculty of Medicine in particular, provide favourable environments for self-determination. The

⁹ Keith Harding, English for Specific Purposes (Oxford: Oxford University Press, 2007), 6-7.

¹⁰ Kennon M. Sheldon, "Positive value change during college: Normative trends and individual differences," *Journal of Research in Personality* 39, (April 2004): 210–211. DOI: 10.1016/j.jrp.2004.02.002

¹¹ Edward L. Deci, and Richard M. Ryan, *Handbook of self-determination research* (Rochester: The University of Rochester Press, 2002): 7-8.

¹² Susan Dandridge Bosher, "English for Nursing," in *The Handbook of English for Specific Purposes*, First Edition, ed. Brian Paltridge & Sue Starfield, (New Jersey: John Wiley & Sons, Inc., 2013), 265

Faculty of Medicine, in particular, because students have to pass a difficult admission exam and can only continue their studies insofar as they remain motivated and allocate sufficient resources. The regime of this institution is distinct from other Romanian faculties where the environment appears to be more stress-free, but this aspect lies beyond the scope of this research.

Noels¹³ views autonomy as a predominant source for the emergence / maintenance of motivation: the higher the autonomy of the students in choosing their teaching / learning methods, in choosing the appropriate tasks and approaches, the higher their intrinsic motivation will be. Nonetheless, Sawyer & Ranta make a pertinent observation: measuring motivation "is more difficult than measuring an ability factor like language aptitude.¹⁴" Statements such as "I am interested in the English language" or "I am interested in using English correctly" may hide an interest in the British or American cultures or the need to communicate properly in English for professional or integration purposes. The declared interest in the language, although conventionally confined to the intrinsic motivation, may be easily circumscribed to the extrinsic category. This conceptual apparatus can thus prove volatile in such situations, therefore it is possible to speak of an aggregate motivation: an apparently intrinsic element sends to the purpose, to the external motivation and vice versa.

The necessity of contextualisation was underlined by Ellis: "it is unwise and probably impossible to attempt to evaluate theories without reference to the context in which they were developed. On the other hand, in their socioeducational theory of second language acquisition, Gardner and MacIntyre state that the motivation to learn a language depends on the learner's attitude towards the respective culture and people. This twofold perspective is significant when trying to understand the context and environment in which the language acquisition takes place. The dynamics of the Romanian culture has been deeply influenced by the phenomenon of universalisation / globalisation. The young Romanian population, active consumer of English audio-visual media, has systematically adopted elements of the American culture mainly, the English language becoming an emblem of personal development and integration. *Mutatis mutandis*, we could identify this

¹³ Kimberly A. Noels, "Learning Spanish as a Second Language: Learners' Orientations and Perceptions of Their Teachers' Communication Style," *Language Learning* 51, no.1. (March 2001): 118-120, https://doi.org/10.1111/0023-8333.00149

¹⁴ Mark Sawyer, and Leila Ranta, "Aptitude, individual differences, and instructional design," in *Cognition and instructed second language learning*, ed. Peter Robinson (Oxford: Oxford University Press, 2001), 320.

¹⁵ Rod Ellis, "Interpretation Tasks for Grammar Teaching," *TESOL Quarterly*, 29, no. 1, (Spring 1995): 88.

¹⁶ Robert C. Gardner, and Peter D. MacIntyre, "A student's contribution to Second Language Learning: Part II, Affective Factors." *Language Teaching* 26, (1993), 1.

process as one of acculturation of the young generation; a phenomenon which operates as a centripetal force, integrating and naturalising cultural and linguistic elements that tend to reconfigure the individual and group identity. The young population is predominantly exposed (and very permeable) to the English language, not only at school, but also outside the classroom, through television, radio, internet and books; English has become such a popular means of communication that sometimes it is difficult for students to find Romanian (existing) equivalents of some English terms. In this context, the challenge of learning a specialised language in English is not significantly greater than learning it in Romanian. However, the question that remains to be considered is the correctness of the already acquired English structures: the students have different language proficiency levels, which might make them more susceptible to give up trying. I tried to prevent such situations by dividing the students into intermediate and upper-intermediate groups.

A more important issue when communicating in a foreign language seems to be the cultural background. For example, the model of doctor-patient interaction is considerably different in the Romanian setting compared to the English one. This disconcerts students who come in contact with or have to produce content consistent with the values and expectations of the target healthcare environment.¹⁷ Students have difficulties understanding the need to assimilate, along with the language, the culture from which the language emerged. This phenomenon alters considerably any form of medical interaction, such as communicating with the patient on sensitive topics (sexuality, drug abuse, alcohol intake), adopting a more tactful approach or culturally appropriate forms of address, etc. When listening to / watching real-life examples, students describe the dialogues as "fake", "exaggerated", or "inadequate to the situation" (such as requesting the patient's permission to ask questions about his/her health) and they do not show motivation in switching to the English language and culture. From here demotivation could arise: beyond any language barrier, there is also the metalinguistic hindrance - the language behind the language. But an effective approach could favour the enthusiasm, the representation and the valorisation of the unassimilable cultural elements.

¹⁷ Susan Bosher, and Melissa Bowles, "The Effects of Linguistic Modification on ESL Students' Comprehension of Nursing Course Test Item," *Nursing Education Research* 29, no. 3 (May-June

b. Strategies

According to Ellis, motivation is defined as the effort made by the learners who need or desire to acquire a foreign language. Huitt describes motivation as the inner drive "that serves to activate or energize behaviour and give it direction. And Dörnyei refers to motivation as "the direction and magnitude of human behaviour, that is the choice of a particular direction, the persistence with it, and the effort expended on it. Motivation appears in these definitions as a driving force that triggers and sustains the effort of learning and persevering. The definitions above revolve around two fundamental factors — the inner state and the outer manifestation; and it is only the latter that is observable and quantifiable. In the learning processes, this effort translates into what the student is willing to do to improve his proficiency level. Therefore, motivation can be put in relation to the development of know-how and of some cognitive parameters essential in the L2 acquisition process, such as the application of learning strategies.

It is still debatable the extent to which motivation dictates the qualitative leap. Students, although interested in a language or motivated to learn it, may lack or may not be willing to devote the time or the energy required to make the transition from wanting to achieving. What is of note is that the theories on motivation and its practical impact have "paralleled a movement away from a predominantly teaching-oriented perspective to one that emphasizes the learner's active role in the learning process.²¹" The learning needs, derived from various forms of motivation, can lead to techniques used by learners to better acquire the language. Such techniques have been referred to as learning strategies. According to Dudley-Evans and St John,²² the learners' process-oriented needs may account for their best strategies and techniques of assimilating a foreign language. Learning strategies are the conscious appraisal and organisation of the study process in order to attain a learning objective. "Strategic learners have metacognitive knowledge about their own thinking and learning approaches, a good understanding of what a task entails, and the ability to orchestrate the strategies that best meet both the task

¹⁸ Rod Ellis, *The Study of Second Language Acquisition*, (Oxford: Oxford University Press, 1994), 715.

¹⁹ William G. Huitt, "Motivation to learn: An overview," *Educational Psychology Interactive*. http://www.edpsycinteractive.org/topics/motivation/motivate.html

²⁰ Zoltan Dörnyei, *Teaching and researching motivation*, (Harlow: Pearson Education Limited, 2001), 8.

²¹ Derin Atay, and Cenzin Ozbulgan, "Memory strategy instruction, contextual learning and ESP vocabulary recall," *English for Specific Purposes* 26, no.1 (2007): 39–40 https: doi: 10.1016/j.esp.2006.01.002.

²² Tony Dudley-Evans, and Maggie Jo St John, *Developments in ESP: A multi-disciplinary approach*, (Cambridge: Cambridge University Press, 1998).

demands and their own learning strengths.^{23"} An analysis of the learning strategies used by the students of EMP provides information regarding their awareness of such strategies, what approaches they use effectively, and which should be stimulated. The use of strategies can be promoted and encouraged by (re)designing the EMP classes, by using special tasks and activities, in such a way that weaker learners, oblivious of their own cognitive process, can be "helped to acquire and use the learning strategies that have been found to be successful.^{24"}

The Diagram of the strategy system elaborated by Oxford²⁵ and used for the second part of my questionnaire categorises strategies as follows:

Direct strategies: memory (e.g. creating mental associations, using imagery or sounds); cognitive (e.g. practicing, interpreting and producing content, translating), compensation (e.g. using deductive and inductive methods, finding alternatives, getting help). Indirect strategies: metacognitive (e.g. organising the learning process, setting goals, assessing their own work); affective (e.g. reducing anxiety, getting encouragement), social strategies (e.g. asking for explanations and correction, cooperating with colleagues).

3. Methodology

The method of research is based on the assessment of a questionnaire conducted on eight monolingual groups of 1^{st} and 2^{nd} -year undergraduates (aged between 18 and 21), majoring in four specialisations at the Faculty of Medicine, Transilvania University of Braşov: General Medicine (GM), General Nursing (GN), Balneo-Physio-Kinesiotherapy and Recuperation (BFKT) and Clinical Laboratory (CL). As mentioned earlier, they are grouped in intermediate and upper-intermediate classes due to their mixed proficiency levels (B1-C1). Their courses run for two years (4 semesters of 14 weeks each), including a two-hour lecture and a seminar every two weeks per group. The questionnaire was conducted during the academic year 2018-2019. The study group consisted of 329 volunteer respondents distributed by degree specialisation, as follows: General Medicine – 41,64 %, (137 respondents); General Nursing – 38,30 % (126 respondents); Balneo-Physio-Kinesiotherapy – 12,46 % (41 respondents); Clinical Laboratory – 7,60 % (25 respondents).

²⁴ Mokhtari, Kouider & Reichard, Carla. "Investigating the strategic reading processes of first and second language readers in two different cultural contexts." *System: An International Journal of Educational Technology and Applied Linguistics* 32, (September 2004): 382.

²³ Anna Uhl Chamot, "Issues in language learning strategy research and teaching," *Electronic Journal of Foreign Language Teaching* 1, no.1 (2004): 14.

http://e-flt.nus.edu.sg/v1n12004/chamot.pdf

DOI:10.1016/j.system.2004.04.005

²⁵ Rebecca Oxford, *Language Learning Strategies: What Every Teacher Should Know.* (New York: Newbury House Publisher, 1990), 17.

The questionnaires consisted of 20 items (aside from the "personal information" section) and used a five-stage Likert scale for the analysis of the motivation and learning strategies. The questionnaire comprised three parts:

- 1. Basic information (year, specialisation)
- 2. Questions about the students' motivation.
- 3. Questions regarding the students' learning strategies.

The data collected were analysed using simple descriptive statistics, determining the mean values and providing an outline.

4. Results analysis and comments

The answers provided information which was divided into two sections: motivation and learning strategies. The questionnaire was applied following the distribution of students by year and specialisation, but the analysis is conducted on the overall mean results. The tables show the mean values for each question, on a scale from 1 to 5, (1 being "I strongly disagree" and 5 being "I strongly agree"). The mean values reflect the answers provided by the undergraduates from all specialisations to the questions provided below. The answers/results are not presented per year of study, as the differences were not significant (less than 0.2 points) and the noteworthy differences per specialisation will be mentioned in the analysis.

a. Motivation

Intrinsic motivation

- a.1. I consider English important.
- a.2. I am interested in the English language and culture
- a.3. I enjoy learning English just for the sake of it
- a.4. I am interested in using English correctly
- a.5. I am not interested in learning just medical English.

Extrinsic motivation

- a.6. I want to live/study abroad after graduation
- a.7. I think knowing English is necessary for better job perspectives
- a.8. I need English to have access to medical resources
- a.9. I want to learn English for a good communication with the medical community
 - a.10. I am interested in English because I would like to do research work

Intrinsic motivation					Extrinsic motivation					
a.1.	a.2	a.3	a.4	a.5	a.6	a.7	a.8	a.9	a.10	
4,68	3,69	3,44	3,13	4,02	1,83	4,74	4,38	3,68	3,82	

Table 1. Intrinsic and extrinsic motivation

Overall, intrinsic motivation scored slightly higher than extrinsic motivation, the highest average score (4,68) being registered in the category "the importance of the English language": 55,63 % rated English as a "very important" discipline, 29,18% as "important", 13,06% - "neither important nor unimportant", 2,13% rated it as unimportant and no respondent rated it as "not important at all". Seven students rated English as unimportant and their evaluation might imply that they see no use of English in their future workplace (no contact with foreign patients or English texts), that they might have low aptitude for languages or that they have no career aspirations abroad. However, all these are factors which are mainly related to the extrinsic motivation and it is quite difficult to distinguish between the reasons one may consider English important and why one does not.

Scores were high on English language and culture as well: 28,57 % rated it with "strongly agree", 31,92 – with "agree", 23,4 – "neither agree nor disagree", 13,1 – "disagree" and 3,04 – "strongly disagree". The lowest scores in this category were registered by the CL (2,6) and GN (3,52) students, whereas the GM (4,41) and BFKT (4,23) undergraduates scored the highest. The same distribution, with GN and CL groups scoring lower, and GM and BFKT specialisations scoring higher, is present in the next two categories – interest in learning English just for the sake of it and interest in using English correctly. The high score (4,32) registered by the GM students in the fourth category (correct English) may also come from the awareness of their future career duties and the vital role played by the English language to that end.

Interestingly, despite the fact that CL and GN students were less interested in the English language and culture, they scored higher in the last category of intrinsic motivation. Uniformly, students from all specialisations were in favour of studying more than just English for medical purposes – the high scores support their enthusiasm manifested during the seminars when topics from other fields are presented in relation to medicine (visual arts, history, literature, music, etc.)

Surprisingly and contrary to my assumption that the majority of students were interested in learning English for emigration purposes, the lowest scores were registered in the category "work/study abroad": 171 students (51.98%) answered with no, 102 (31%) said they were not sure and only 56 students (17%) were interested in relocating and/or in going to study abroad.

Better job perspectives and having access to medical resources were factors of higher extrinsic motivation for all undergraduates, although the lowest score was

registered by the CL students, as their future profession will most likely imply the least use of English. And unsurprisingly, GM undergraduates showed the highest interest in learning medical English for research purposes, since they are expected to use academic writing and communication in English in their future careers.

Based on these figures, we can conclude that the interviewed groups show moderate to high motivation, with lower scores in CL students and with seemingly higher scores in GM respondents.

b. Learning strategies

Memory strategies:

- b.1. Every time I learn a new word, I try to associate it with already known concepts / notions
 - b.2. I try to use the new words in sentences to remember them better Cognitive strategies:
 - b.3. I try to imitate the pronunciation of native speakers
- b.4. I try to understand the meaning of a text without translating every word into Romanian
 - b.5. I read, I watch and listen to materials in English

Compensation strategies

- b.6. If I do not understand a word, I try to guess it from the context
- b.7. If I do not find the right word, I try to use synonyms or to explain it Metacognitive strategies:
- b.8. I organise my English learning time according to the goals I have Affective strategies:
- b.9. I try to relax when I need to speak English and not be stressed because of the mistakes I make / might make

Social strategies:

b.10. If I do not understand something, I ask the speaker to repeat or to clarify what he/she has said.

Memory		Cogniti	ve		Compensation		Meta- cognitive	Affective	Social
b.1.	b.2	b.3	b.4	b.5	b.6	b.7	b.8	b.9	b.10
3,61	3,89	2,93	3,35	4,24	3,7	3,42	3,08	2,99	3,31

Table 2. Learning strategies

The first apparent observation is that the overall mean score in motivation (3.74) is slightly higher than the overall mean score in the learning strategies (3,45). Regarding learning strategies, the lowest score was registered in the categories "I try to imitate the pronunciation of native speakers" (cognitive) and "I try to relax when I need to speak English and not be stressed because of the mistakes I make / might make" (affective). Affective factors may account for underused cognitive strategies: abstaining from imitating native speakers can arise when students lack selfconfidence or are afraid of looking ridiculous and being judged, when they have introvert personalities. Moreover, the inability to relax and the fear of making mistakes are common in the Romanian education environment, where mistakes are sanctioned and discouraged. For this reason, a score lower than the average is encountered in the social strategy investigated ("If I do not understand something, I ask the speaker to repeat or to clarify what he/she has said"). Students hardly ask questions, even when they need clarifications, because they are embarrassed not to know the answer or to seem ignorant, despite being encouraged to do so. From this point of view, I looked for some teaching strategies that would help them relax: encouragement when they seem insecure, oral presentations, debates, fun games.

Students also scored low in the metacognitive strategy ("I organise my English learning time according to the goals I have"). This can indicate a lack of organisation and/or objectives related to learning English, due to time constraints or to low motivation. A teacher, however, cannot do much to improve students' time and work management, to motivate them to allocate time to learning English rather than a fundamental discipline, or to help them avoid procrastination. After all, their advanced listening skills may be due to their way of procrastinating – watching English language films and listening to English-language music. This may account for the fact that the strategy that scored the highest was "I read, I watch and listen to audio materials in English" (52.89 % rated with "strongly agree" and 26.14 % – with "agree" and none with "strongly disagree"). The students with the lowest scores in these categories were those enrolled in the CL and GN programmes.

In terms of memory strategies, undergraduates scored above average. The category "Every time I learn a new word, I try to associate it with already known concepts / notions" is the other one (of the two) where nobody rated it with "strongly disagree", but also the category which had one of the highest scores with "neither agree nor disagree" (31,91%), which may indicate a certain doubt regarding its use or efficacy. However, teaching new terminology to students is more useful if the terms are presented in relation to other notions, and then included in exercises such as mind mapping, labelling, lexical families, etc. The strategy of using new words in sentences has a high score among the 1st-year students (40.12%) as, especially during the first academic year, they are given written assignments with these exact tasks.

Another cognitive strategy in which students scored high is "I try to understand the meaning of a text without translating every word into Romanian." When they have to deal with longer, academic texts, especially pre-intermediate students tend to block, because of the unfamiliar word order, because of difficult structures or unknown words. Sometimes they mistranslate these words, by making erroneous associations with other English words or with other Romanian terms. An exercise that is useful to them is precisely the practice of studying such texts, so that they get used to this kind of work.

5. Conclusions

It is sometimes difficult to make a clear distinction between intrinsic and extrinsic motivation. Regardless, preliminary findings do not conform the hypothesis that in medical undergraduates' motivation is likely to be extrinsic rather than intrinsic. Students appeared interested in external factors such as professional and integrative goals (better job perspectives, access to medical literary resources, establishing a better connection with the medical community). But they scored slightly higher in intrinsic motivation, as they showed considerable interest in the English language and culture. Cultural elements can be used by the teachers to generate curiosity and to encourage class engagement. On the other hand, extrinsic motivation can be used by teachers to complement their students' intrinsic motivation.

The analysis of the data obtained confirms another hypothesis, namely that a higher degree of motivation will lead to a higher use of learning strategies. The scores obtained in the two categories are similar: GM and BFKT students had the highest scores for both motivation and learning strategies, while we can notice a significant correlation between the lowest scores in both motivation and learning strategies where CL and GN students are concerned. Also, students with a higher level of motivation (both intrinsic and extrinsic) seem more aware of learning strategies and use more complex strategies than lower-motivated students.

This research study is a first step in determining an effective way of elaborating teaching strategies necessary to improve the language competences of the medical students. The findings generate a basis for designing a course tailored to the students' interests, as motivation can have a substantial influence on the language learning process, both qualitatively and quantitatively. To that end, some other variables should be considered: novelty, pleasure, activeness, ability, etc. Moreover, students are exceedingly dependent on media and digital technologies, which may affect their motivation and use of learning strategies, so teachers should also consider how and when to use digital resources and when to appeal to the tested, "classic" teaching elements (screen walls, projector, workbooks, etc.). Continuous exposure to the specialised vocabulary is key, practiced by means of various vocabulary activities, adapted to the needs of the students' specialisations.

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Such activities include reading and listening comprehension as well as different tasks including collocations and academic writing patterns. Students should also be involved in adequate speaking situations enabling them to contextualise the medical/general terminology.