

The Promotion of Medical English Teaching Process through Modern Technologies

تعزيز عملية تدريس اللغة الإنجليزية الطبية من خلال التقنيات الحديثة

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Abstract:

Actually, the spread of English has attained many fields including the medical sector. Medicine is a domain that needs a huge international collaborations and update of the advancements like in pandemics. In fact, Medical English necessitates a well development of materials with authenticity. The selected tools are a central step in the teaching process. This exploration highlights the teaching of medical English at University Djilali Liabes portraying beliefs and challenges regarding the implementation of modern technologies in teaching English for medical purposes. The need of modern technologies is agreed yet the familiarity with such tools is still not fulfilled.

Keywords: Teaching, Medical English, Modern Technologies, Medicine.

الملخص:

في الواقع، نلمس انتشار اللغة الإنجليزية بشكل ملحوظ في العديد من المجالات بما في ذلك القطاع الطبي. الطب هو مجال يحتاج إلى تعاون دولي بشكل مكثف و يتطلب مشاركة آخر التطورات والتحديات الطبية كما كان الحال في الأوبئة. في الواقع تتطلب اللغة الإنجليزية الطبية تطويرًا وتحضيرًا جيدًا لوسائل التعليم حيث الأدوات المختارة هي خطوة مركزية في عملية التدريس. تسلط هذه الدراسة الضوء على تدريس اللغة الإنجليزية الطبية في جامعة جيلالي ليابس والآراء المتداولة والتحديات المتعلقة بتطبيق التقنيات الجديدة في تدريس اللغة الإنجليزية للأغراض الطبية. تم الاتفاق على الحاجة إلى وسائل التعليم الحديثة، إلا أن الإلمام بهذه الأدوات لم يتم تداوله بشكل مكثف بعد.

الكلمات المفتاحية: الإنجليزية الطبية، الطب، التدريس، التقنيات الحديثة.

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1. Introduction

Globalization influenced largely the worldwide use of English language. Medicine is a science interrelated to many fields such as physics, chemistry, biology and environment which make teaching English for medicine a challenge for an ESP (English for Specific Purpose) teacher. In this context, the key question that may come into minds is how to find the relationship between learning English and the studies of the composition, structure, properties and change of matter in physiology or metabolism which may look like too different horizons. Clearly, it is required for communication with pharmaceutical companies, congress, studies and knowledge about the most recent medical update. Moreover, for any academic purpose starting with reading the scientific resources and references such as articles, books etc... to share researches and publications or through conferences which become more and more important. The use of video and audio-visual tools is very needed than traditional teaching. However, the frequent use of ICT's (Information and Communication Technologies) by students might motivate their interest and stimulate them to embrace a newer mode of acquisition of knowledge and skills for the sake of promoting their thinking capacities and developing their autonomous learning.

This study accentuates teaching English for medical purposes as a module, the teachers' role in boosting students' motivation and the influence of the used modern technologies and the syllabus on the learners' achievement. Lastly, the learners' attitudes, their needs and the hindrances they are facing during the learning traditional process. This is an analytical exploration of recent studies on effect of modern technologies in enhancing English for medical purposes.

2. Medical Students' Needs

The prior sake of medicine is "people-directed". Hence, doctors and medical personals must have humble personality, respect and patient needs. That is why medical purposes relay first on communicative skills as priority. Moreover, it is a field based on international collaboration and healthcare of severe patients.

Several studies have underlined that motivation is the key element and the fundamental component for enhancing language proficiency [1-2]. In this way, Gardner (1982) [3] determined that it reveals the effort, desire, and satisfaction which is the fruit of an internal and external forces. Besides, Harmer [4] stated that motivation is a mixture of attitudes and affection that influence the learners' effort in order to learn a language. Indeed, Dornyei [5] claimed that motivation depends on the language level, learner's level as well as

the learning situation. Moreover, motivation in ESP can make learners overcome challenges and difficulties. Previous researches, however, dealt with the link between motivation, the choice of the content and the selection of materials. [6-7-8].

ESP depends on the situation in which language is used. It also emphasizes on learners 'need while designing the course [9]. Indeed, university students feel most of the time frustrated in ESP course because of their limited repertoire of vocabulary [10]. Another key point to be mentioned is that it connects medical world with English language. Firstly, resources are hugely available in English language. Secondly, communicating ideas in order to collaborate and get out with better discussed results is better in English. Thirdly, exposing allows data to be easily read and reach most researchers in different continents. Moreover, English as an international language is used in ordering chemicals from laboratories or industries or companies understanding and receiving much more information by asking questions for the doctors' community. However, attending international conferences is becoming easy due to the widespread of English. In addition, being in touch with actuality allows being open to scientific achievements.

With this attention, it is worth noting the necessity for the use of new methods in order to motivate scientific learners. Thus, it is crucial to investigate how teachers boost students' motivation and enhance their achievements focusing on teachers' behaviors, methods, relationship and choice of materials as well as the rise or decrease of students' motivation and academic achievement. Learning English is, therefore, indispensable and very needed for medical purposes because it facilitates and helps learners to be in touch with the world. It also emphasizes their scientific luggage of medical fields and other disciplines as well.

3. Traditional Medical English Teaching

Almost, medical English in the Algerian context is done based on very limited materials designed by the teacher and few tasks about scientific texts addressed to the medical students. Furthermore, student-centeredness is less attempted.

Inside the classical medical English teaching, the focal aim is to enlarge professional vocabulary, grammar and receptive skills. The teacher will pay more attention to productive skills important for all medical staff mainly the communicative competences [10-11].

4. Modern Technologies in ESP

Due to the huge demand on ESP, teaching methods should be of a high quality to satisfy students' needs. Nowadays witnesses the availability of modern rising technologies namely 3D printing, mobile technology, tablet readers, artificial intelligence, slide presentations, games, medical flash video, social media, teleconferences etc.... These new

trends tend to permit to medical students to develop publically speaking and debating. They can also be self-organised and motivated. Moreover, they tend to develop their memory, critical thinking and autonomy.

For a better use of modern technologies, teachers and learners alike are required to undertake a specific training for the promotion of their abilities. In fact, the use of technological means in ESP offers students a lot of benefits through interactive and communicative tasks related to their professions to tools for giving feedback and self-scoring [12]. Yet, the use of ICTs in ESP is a challenge [13].

5. Research Methodology and Study Design

This paper aims at illustrating the importance of modern technologies in teaching English for medical purposes in Algeria. It attempts to provide the nature of views and attitudes and their direct impact on medical students' achievement in Algerian circumstances. It also aims to cover student's perceptions highlighting the effect of teachers' methods on their achievement and proficiency.

This research is principally based on the use of an online survey and a teachers' interview as a means of data collection. In order to test the hypothesis, a case-study is done for the examination of doctors as a reference. Under those circumstances, the survey permitted the researchers to explore and to comprehend problems and their interrelation, then to analyze the current situation or finding solutions for consequent research problems. Furthermore, the teachers' interview contributed in understanding to which extent teaching English through modern technologies is effective in ESP classrooms. However, by the end of July 2021, an online survey was spread through Face book groups whereby 55 Algerian students of medicine participated in the current study.

6. Students' Questions and Results

Question 1: Do you think that medical English is necessary in Algeria?

The findings highlight that all participants believe that Medical English is very important in Algeria and they wish that medicine will be shifted to English. Algerian future doctors are largely interested in learning Medical English since English is international and fits well with medicine profession due to the challenges and the need of international collaboration as it is the case during the pandemic Covid19.

The online survey that was addressed to medical students in the Algerian context emphasizes that the totality of them with a percentage of 100% are entirely convinced that Medical English is necessary in Algerian medical domains. They strongly believe that it is time to switch toward the use of English for future doctors in order to be internationally

connected with the universal medical advancements and worldwide international collaboration. While (0%) percent of the participants view that medical English is not worth.

The Awareness of the use of Medical English is clearly rising among Algerian medical students, that is to say our future doctors in Algeria. They all would like to master Medical English and practise it. Nowadays, an international collaboration and data is required such in pandemics and the spread of new disease, which are faced the first time in the history of humanity

Question 2: Do you think that modern technologies help more than traditional learning of medical English?

The majority of participants express that technologies are interesting in order to master medical English while a minority of them disagree. In fact, they reported that they are still unfamiliar with these innovations. Thus, not all the participants show their readiness for any change.

Furthermore, findings highlight that only (12, 7%) of the participants believe that modern technologies are not important for learning medical English, whereas (87, 3%) of the medical students totally welcome the use of modern technologies in teaching English for medical purposes. This proves that there are still some students, who are not comfortable and familiar with the use of technologies in Medical English classes. For them, the mastery of computer science skills is far from being reached, the case which affects students' opinions toward modern technologies. However, attitudes toward their use differ from a person to another and from a gender to another and from a need to the other one. Medical English includes images and videos that seem quite hard to teach using traditional methods of teaching in ESP than any other fields since it is a practical career.

Question 3: What types of technological devices do you find effective?

The findings emphasize that a number of Algerian future doctors prefer video and post casts because they facilitate more the learning of medical English, while some of them stated that 3d image and printings are more helpful. However, they saw that mobile applications and tablet readers are more effective.

In this exploration, it has been indicated that the most modern technologies that may interest medical students and seem more effective for their medical English learning are respectively video post casts with a percentage of 34.5%, 3D images and printings with a percentage of 30.90%, mobile applications with a percentage of 20% and tablet readers with a percentage of 14.5% of the informants.

The choice and the suitability of modern tools may differ according to several factors as the need of learning skills as well as attitudes and the availability of the technologies. Students may use well a tool than the other and practice it daily than any type. Attitudes and opinions regarding changes require the willingness and the acceptance to use it and to face challenges toward this shift.

Question4: What kind of difficulties do you confront in learning medical English?

Future doctors expressed that among the difficulties they face in learning medical English are the problems of communication because they do not have enough abilities in English speaking and writing. Indeed, for them some medical words are very hard to be understood and spelled in English which is not the fact with the French language. They strongly feel that they lack vocabulary because it is not practiced in reality inside hospitals and faculties of Medical Science.

Some of them stated because the medical terms seem very hard, it is then pertinent to select an easy language when studying medicine. For them, the basic thing to do when learning and receiving scientific information is to simplify it and English is the perfect language to realise this. Yet there are difficulties when learning with incompetent teachers, who do not favour any reform of the system of education. They added that these failures occurred because the English language was marginalized in Medical Science and if they start in the future to study using the English language, they will surely prosper and get forward.

The majority also confirmed that English is easier than French, and scientific researchers are more available in English .Thus, studying medicine in English would remove a lot of learning difficulties because it is a simple language that the whole world uses.

Some others claimed that they might understand technical words in medicine but not literary terms in one sentence. Though their level in English may be low, some efforts are required. The fact that they have studied medicine in French for many years makes it hard for them to adapt their knowledge in English though they really support the idea. Furthermore, the ability of providing professors to teach medicine with its diverse themes and specialities in English is still a challenge in Algeria.

7. Interview with Teachers of English for Medical Purposes

In this study, it was important to emphasize on the experience, the attitude and the opinions of medical English teachers added to those of learners for a better portrayal of

teaching medical English in Algeria as a whole. However, three teachers (03) of medical English at the University of Djilali Liabes have accepted to answer the forthcoming questions:

Question1: Are you medical personals or general English practitioners?

They stated that there are medical personals, who are biologists and pharmacists holding a degree in English that is why they are teaching Medical English, while there are general English practitioners too, who teach in the Faculty of Medicine.

Question 2: How long ago have you been teaching medical English?

Participants mentioned that the totality of teachers have at least more than two years of experience in teaching medical English in the Faculty of Medicine. They confirmed that the experience is very important because the teacher acquires the skills to manage challenges in the medical field and get used and familiar to face them.

Question3: Do you use modern technologies in Medical English courses?

The findings show that it depends on the teacher's abilities and how she or he organizes teaching. However, there are teachers who intensively use some of the technological tools like Data Shows, videos, audios and images; while others rely on classical teaching and classical communicative tasks. Definitely, most of the courses are delivered by audio-visual tools.

Question 4: Can you mention your experience with the use of technological devices and what was students' reaction towards them?

For them, generally students seem interestingly motivated inside the classroom, when technological tools are used. They are most of the time attracted by sounds, colours, body language and images for they help them to understand and guess the meaning of the words. Surely as they added that they are directly exposed to the correct pronunciation and this fact is beneficial for the development of their speaking abilities. They also explained that traditional classes are left by students. Indeed, only few of them attend mainly because medical English is a complementary and not a fundamental module for medical students and with a low coefficient.

For them, almost not all students attend English classes because for some students it is an easy module, whereby they can have the average even without the help of the teacher and they can answer easily in the exam. They also confirmed that teaching Medical English using technological tools can be highly rewarding yet very challenging. In fact, the majority of students seem to be very keen, interested and active during the course.

Question 5: Do all learners appreciate medical English?

They mentioned that the purpose of studying medical English differs from a student to another. Some of them focus only on having a good mark, while many of them are aware of the importance of English in their future carriers and may have ambitions to reach international levels and to work in foreign institutions.

Question6: Do you think that training in medical English is required for the promotion of the teaching process?

They confirmed that it would be better if there would be a training regarding medical English for teachers with General English background. Training, however, is not recommended for medical personals, who are already expert in medical fields.

They added that without a medical baggage, it is hard to engage in teaching. Indeed, every teacher is obliged to learn first medical terms and make researches trying to understand every word before transmitting concepts to medical students. This may require additional time and efforts from the teacher relying on himself to reach these academic goals. Yet, there must be training for novice teachers in the field.

Question 7: Do you think that medical English teachers need training in computer and modern tools?

They answered that the majority of teachers believe that it's really time to use well and shift toward innovations mainly after the pandemic in order to manage any crisis in the sector of education in periods of wars, epidemics and any other issues. However, technologies are important facilitating tools mainly in technical English and for other fields. ESP for them requires many challenges than traditional classes of general English. Furthermore, they ensured that modern technologies help to gain time and energy with intensive exposition to technical English.

They also stated that students are more motivated to those kinds of authentic materials than handouts, text prints and oral conversations. Such trainings are necessary because many teachers lack computer skills and technological applications use in general. They insisted on the fact that if technology is combined with English, competent teachers will be formed in any field. Therefore, it's highly recommended for teachers of medical English to learn how to deal with the different technological tools that exist nowadays.

Question 8: Do you teach general English or medical English?

They mentioned that the situation depends on teachers and certainly the majority of them are doing their best to improve technical English proficiency of their students in reading and writing medical texts as well as in doing oral presentations.

They added that the degree of teaching general English differs from a teacher to another according to their knowledge in the field and their experience in teaching. Some believe that to master medical English, they should have the basis in general English too. In fact, the majority teach a mixture between the two of them.

Question 9: Do you think that medical English courses in Algerian universities satisfy future doctors' needs?

They mentioned that learning medical English requires the willingness of students to do efforts and to face difficulties. In fact, in medical English it is very important to be autonomous and to be independent because it is a vague domain that necessitates an update with the new medical terms, new pandemics and treatments.

They also insisted that medical English session is not enough without being self directed, curious, updated, motivated to read a lot of technical terms and this is not an easy equation for both learners and teachers. To some extent, they added : 'yes it does'. However, 'a well-designed curriculum for each level should be considered'.

Question 10: How many hours do you teach medical English? & do you think that the devoted time is largely enough to reach academic goals?

They stated that English course is a session per week for medical purposes as dentistry, pharmacy, biology and other departments. Basically, it is few and not enough because students need intensive exposure to the technical language. In fact, it will be better if there will be any additional hours for medical English .It is certainly not enough to fulfill all the required goals.

8. Discussion of Results

ESP classes are surely important to make students get in touch with the standing of learning the international language and why they should do it. In like a manner, developing new efficient methodologies in teaching English for medical purposes itself is greatly demanded for motivating students to learn it comfortably and by the same token giving them a free space to reveal to themselves linguistic competencies by stimulating scientific debates.

Because nowadays information and technology as English becomes a Worldwide need, what if combining modern technologies with English in a very important sector such as medicine? Almost medical publications are more in English than any other language. A medical English teacher may surely not be comfortable due to the absence of skills in medical fields. Nonetheless, the medical technology is not a matter for students. Also, the design of curriculum for medical purposes is also among teachers 'challenges, the same as keeping medical students concentrated, which might be done by using new technologies. Medical

terms are however originated from Latin or Greek, but many new terms are recently included by new discoveries as mostly include compound nouns and adjectives and use suffixes and prefixes. Such a characteristic of medical English requires a specific way of teaching than any other field with a communicative aspect focusing on students' needs.

By all means, developing ESP course materials, selecting course content, and networking with other community colleges are essential elements for teaching and learning academic English as a second language according to Wu [6]. The application of modern technologies should be done with the training of ESP teachers and learners. Hence, the awareness of such modern tools must be spread among Algerian universities.

9. Suggestions of the Study

For a successful medical English teaching and the application of modern technologies in ESP in general some of suggestions are cited:

- Training in modern technologies for both students and teachers is necessary for the fulfilment of academic goals as well as for the improvement of the level of proficiency.
- It is pertinent to increase hours of courses in English for medical purposes.
- Fostering communicative abilities in English notably reading, speaking and writing is recommended because they are very important skills to improve abilities of students of medicine, who have difficulties in using medical vocabulary because they simply use to confuse between French and English language. Therefore, it is important to be aware of the importance of English language in parallel to French language.
- Teachers should encourage their learners requesting from them to depend on themselves and showing them major techniques on how they can depend on themselves in order to achieve a certain degree of autonomy. Such involvement will surely help developing their motivation level. Thus, it is worth stating that the teaching approach should be learner-centred in terms of course materials and teaching methodology.
- Needs analysis should be the starting point for the design of courses, syllabuses and the selection of materials. Needs analysis is principally what learners will be required to do with the foreign language in the target situation, and how learners might best master the target situation during the period of training [14]. However, the objectives should focus on achieving goals [15]. According to [16]:

'If we accept that a student will learn best if what he wants to learn, less well what he only needs to learn, less well still what he either

wants or needs to learn, it is clearly important to leave room in a learning program : i.e., for the learners' own wishes regarding both goals and processes'

Therefore, it is of paramount importance to identify the needs according to priorities in order to recognize the objectives for which the language is needed, situations in which it will be used and of course with whom it will be used.

10. Conclusion

The present study portrays the situation in which English is taught in the Faculty of Medical Science at Djilali Liabes University. It points out on efficient teaching methods, adequate syllabus that responds to the students' needs and which are more learners-centered and teachers-centered under some specific circumstances. Thus, it is time to move toward a smooth, facilitating, agreeable and productive atmosphere among English classes. Furthermore and in addition to their course adaptation according to their learners' needs; teachers should be active in creating a positive enhancing technological environment pinpointing on the learners' differences in ESP classes and the authenticity of the materials. The latter may largely attract learners' attention and make them more motivated particularly through their daily use of videos, power points, tapes recording etc..., the fact which makes them also ready to learn English and to promote their language skills and proficiency.

In this context, it is worth noting that technology can accelerate the shift from teacher centered approaches to learner centered ones. Indeed, a total dependence on the information and communication tools can bring positive benefits for both learners and teachers. They can give them the possibility to stay in touch with people, students and doctors from different places in the world.

It is also of great importance to mention that in Algeria, deficiencies on how to use the various types of technological equipments and programs in addition to the lack of effective training courses, the lack of time and financial supports and the various constraints remain the major barriers that prevent teachers' progress and discourage training English language learning. It is therefore recommended to start thinking about the adoption of a policy that encourages the use of modern technologies at the level of all our Algerian universities focusing principally on the availability of the tools, the permanent verification of technical problems and the mastery of computer skills.

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