

# Learning of medical English and academic curricular reform in medicine

## Apprentissage de l'anglais médical et réforme curriculaire académique en médecine

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### RÉSUMÉ

**Introduction:** L'anglais est indispensable dans le domaine des sciences et particulièrement en médecine : c'est la langue prédominante des publications et des bases de données bibliographiques médicales. Par ailleurs, la formation de médecins compétents et la fondation d'une faculté de médecine socialement responsable et afin d'être en conformité avec les standards internationaux stipulés par l'accréditation et la certification des facultés de médecine, la faculté de médecine de Sousse-Tunisie a entamé une révision curriculaire aboutissant à la constitution d'un groupe de travail de réforme du système « Anglais Médical ».

**Objectif :** Identifier les défaillances à combler relatives à l'apprentissage académique de l'anglais médical suite à une analyse des spécificités de l'enseignement, poser le diagnostic de la situation actuelle et proposer les recommandations requises.

**Méthodes:** L'analyse du processus d'enseignement de l'anglais médical a été abordée en couplant les deux méthodes liées à la cause et à l'effet: la méthodologie SWOT (Strength-Weaknesses/ Opportunities-Threats) et le diagramme d'Ishikawa.

**Résultats:** L'analyse de la situation d'apprentissage de l'anglais médical a révélé un manque d'efficacité pour diverses raisons liées au manque d'identification des besoins d'apprentissage par niveaux d'une façon claire et précise, une insuffisance quantitative et qualitative concernant le volume horaire avec une répartition inadéquate par rapport aux autres disciplines et un contenu non mis à jour. Ainsi, un déficit des ressources humaines et matérielles innovatrices.

**Conclusion:** L'apprentissage de l'anglais médical doit bénéficier d'une revalorisation afin de perfectionner les compétences et promouvoir la qualité des soins.

### Mots-clés

Apprentissage - Projet - Réforme - Anglais-médical - Faculté de médecine.

### SUMMARY

**Background:** English is indispensable in the field of science and especially in medicine: it is the predominant language of publications and medical bibliographic databases. In addition, the training of competent physicians and the foundation of a socially responsible faculty of medicine and in order to comply with the international standards stipulated by the accreditation and certification of faculties of medicine, the Faculty of Medicine of Sousse- Tunisia initiated a curriculum revision leading to the setting up of a working group to reform the «Medical English» system.

**Aim:** To identify the deficiencies of the academic learning of medical English following a rigorous analysis of the specificities of the teaching, to make the diagnosis of the current situation and to propose the required recommendations.

**Methods:** The analysis of the so far medical English teaching process at the Faculty of Medicine of Sousse was approached by coupling the two methods related to the cause and effect: the SWOT (Strength-Weaknesses / Opportunities-Threats) methodology and the diagram of Ichikawa.

**Results:** Our analysis revealed a lack of effectiveness for various reasons related to the lack of identification of learning needs by levels in a clear and precise manner, a quantitative and qualitative insufficiency of hourly volume with an inadequate distribution compared to the other disciplines and content not updated. Thus, a shortfall in innovative human and material resources.

**Conclusion:** The learning of medical English must be upgraded in order to improve skills and promote the quality of health care.

### Key-words

Learning – Project - Reform – medical-English - Faculty of Medicine.

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## INTRODUCTION

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English, as a language, is essential in the field of science. In medicine, especially, it is the predominant language of majority of scientific publications, research works, congresses, recommendations and consensus. Moreover, this language tends, nowadays, to become preponderant in most of bibliographic databases (1,2).

Medical students inevitably need to develop their competencies in English in order to be able to benefit from knowledge in the medical field which is recognized as an everyday innovation science where publications are mainly in English (3).

In the context of Tunisian higher education, English was neglected for a long time, and when first introduced, it was optional, with no evaluation or examination (mainly punitive), which contributed, with other factors, to its devaluation not only by students but also by teachers.

Given the importance of this language in the training and professional career of doctors, it has now been strongly inserted into the university medical education curriculum by setting learning objectives classified by level, and by using methods adopting new ICTs (Information and Communication Technologies), thus making it possible to meet the identified learning needs.

English taught in the medical training curriculum must follow three rules in order to communicate in three different situations that are: "colloquial English" used to communicate around a patient, "formal English" adopted to communicate scientifically, "scientific English" allowing correct and adequate scientific writing (4).

In order to meet international guidelines and standards for medical education, the Faculty of Medicine of Sousse has begun a curriculum revision of recent years. The implementation of a new curriculum by "integrated systems" is currently depending on the teaching staff's work, within the committees (systems) unit where necessary educational activities and tools are developed. Each committee is composed of various specialists (clinicians, fundamentalists, physicians...) who do not belong to the discipline, consultants in pedagogy and necessarily teachers responsible for the discipline).

The leading group of "Medical English" committee has been set up in that sense, and its mandate was to establish reform of medical English teaching program after having drawn up an inventory of its so far adopted teaching methods and tools with an evaluation of their suitability degree. In addition, an identification of training needs in

medical English according to the level of medical training must be established from the first level of medical studies (PCEM1) to the last level of the second cycle of medical studies (DCEM3), evolutionary developments of medical English skills needing to be reinforced: reading, writing, listening and speaking).

Our study's objectives are identifying weaknesses to be rectified in the academic learning of medical English at the Faculty of Medicine of Sousse after analysis of that discipline teaching and suggesting the necessary recommendations following the situation diagnosis, taking into account the parallel taught disciplines, subjects, modules and systems so that medical English teaching become concomitant, in accordance and harmonious with them.

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## METHODS

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The analysis of the so far medical English teaching process at the Faculty of Medicine of Sousse was approached by coupling the two methods related to the cause and effect: the SWOT (Strength-Weaknesses / Opportunities-Threats) methodology and the diagram of Ichikawa (or diagram of the five M).

### - Application of the SWOT method: Strengths-Weaknesses-Opportunities-Threats:

Using this method allows to identify strategies in order to achieve desired objectives. It is an internal and external analysis method using a four-window matrix as "Strengths, Weaknesses, Opportunities, Threats". Internal analysis identifies strengths and weaknesses. External analysis identifies opportunities and threats.

SWOT analysis was carried out by a multidisciplinary team of university medical teachers from the Faculty of Medicine of Sousse who are also referent in pedagogical quality and development, together with university teachers specialising in medical English. They are responsible for university Medical English learning as well as the administrative managers in medical university education. To implement this method, it is necessary to use a SWOT table in the form of a four-column grid (Table 1).

### - The cause-effect diagram (of the 5Ms), or Ishikawa diagram:

This diagram graphically depicts the causes of an effect. It can be used as a moderation tool and as a tool for synthetic visualization and communication of identified causes. It is also used in the context of researching the cause of a

problem or identifying and managing risks when setting up a project.

This diagram is usually structured around the 5M concept and actually recommends looking at the event in five different aspects, summarized by the acronym and mnemonic means or 5M:

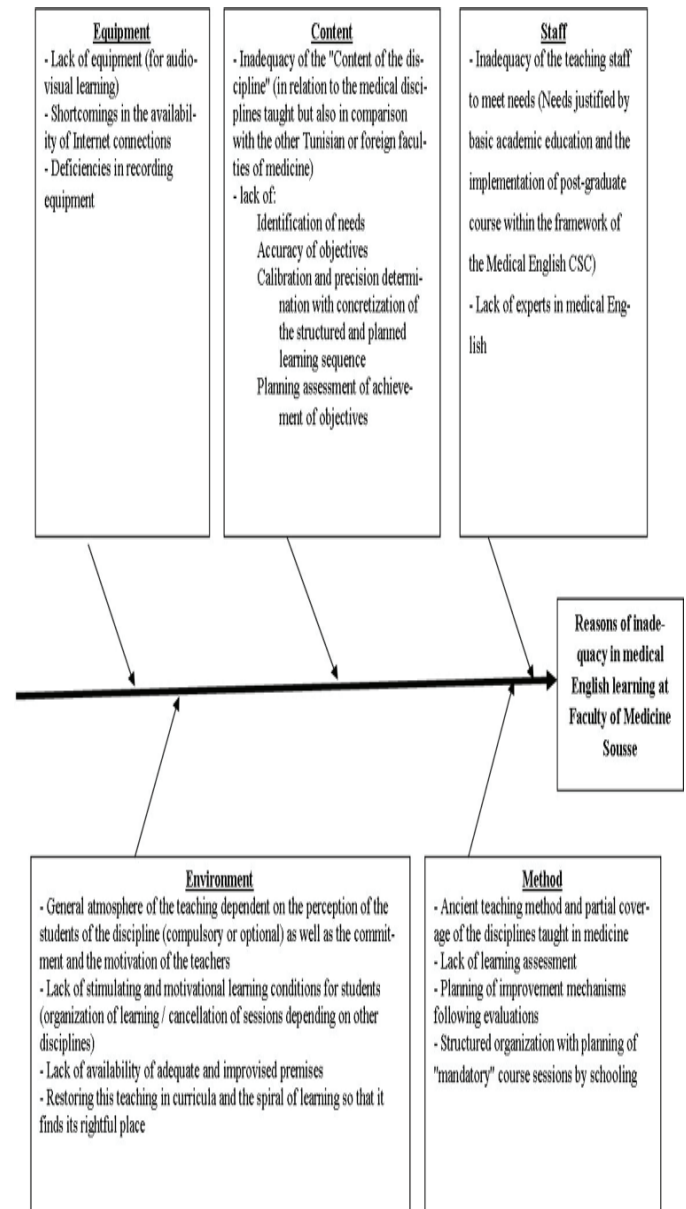
- 1) Subject: used subjects and materials and relevant process inputs.
- 2) Equipment: adopted equipment, hardware, software and technologies in the analyzed activity.
- 3) Method: operating mode and logic of the implemented process.
- 4) Staff: needed human interventions' mobilization for the activity.
- 5) Environment: environment, positioning and general surrounding context of the practice performance.

## RESULTS

An overview of medical English teaching situation is in current achievement at the Faculty of Medicine of Sousse. Thus, our analysis of medical English's learning situation at the Faculty of Medicine of Sousse-Tunisia (Figure 1) was completed; it revealed lack of its efficient learning for various reasons relating to:

- Lack of identification of learning needs by levels,
- Lack of clarity and precision of learning objectives,
- Quantitative and qualitative inadequacy concerning the allocated volume of time with improper distribution in relation to needs taking into account the content of other disciplines,
- Adoption of in-updated learning means not using the new information and communication technologies, with student repositioning at the center of learning while trying to make it as active as possible,
- Inadequacy of achievements assessing methods of this discipline, in particular the lack distribution between theoretical and practical concepts of formative and the summative evaluations;
- Lack of appreciation of level learning objectives achievement with no structured evaluation organizing all level learning activity;
- Lack of human resources to adequately meet the learning needs: in fact, the workload of the teacher in charge of the discipline and the four collaborating teachers increased after the introduction of post-graduate Complementary Studies Certificate in Medical English which has an impact on academic education;

- Lack of English laboratory renovation premises with the need to adapt them to the currently recommended learning needs;
- Insufficient material resources related not only to computer equipment but also to audio-visual stuff in addition to the need for equipping English laboratory with adequate internet connection (table 1).



**Figure 1:** Reasons of inadequacy in medical English learning referring to Cause-Effect Diagram (Ishikawa Diagram)

**Table 1:** SWOT Analysis (Strengths-Weaknesses / Opportunities-Threats)

<b>External diagnosis</b>		<b>Internal diagnosis</b>	
<b><u>Opportunities</u></b>		<b><u>Strengths</u></b>	
<ul style="list-style-type: none"> <li>- Strengthening and updating the skills of teachers</li> <li>- The advent of curriculum reform and international recognition of the training curriculum.</li> <li>- Possibility of standardization of national and then international learning</li> <li>- Possibility of certification of this learning for a large scale recognition</li> </ul>		<ul style="list-style-type: none"> <li>- Commitment and dedication of teachers</li> <li>- Perceptions and wills, shared by all the participants, to re-situate the place this discipline has in the spiral of the learning</li> <li>- Student attachment to this discipline</li> <li>- Teachers and students are convinced of the importance of this discipline and its role and impact</li> </ul>	
<b><u>Threats</u></b>		<b><u>Weaknesses</u></b>	
<ul style="list-style-type: none"> <li>-Teaching that does not meet the normative requirements and the current and new recommendations for learning</li> <li>- Teaching not recognized elsewhere for lack of standardization and validation</li> <li>- Teaching partially meeting the needs</li> <li>- Teaching that does not promote the knowledge and skills updating</li> </ul>		<ul style="list-style-type: none"> <li>- Lack of resources: material, premise and human</li> <li>- Inadequate perception of the place of this discipline among students, teachers and administration</li> <li>-Organizational failures of structured training</li> <li>- Evaluation methods partially meeting standards</li> </ul>	

## **DISCUSSION**

The social responsibilities of medical schools require training competent health professionals having both the requisite medical skills and the essential communication skills for an adequate and up-to-date medical practice, which will contribute to the establishment of a both efficient and equitable health system. Thus, medical faculties may satisfy the changing needs of the society that are marked by the intricacy of socio-cultural diversity.

Recognizing the importance and scope of this issue, the Faculty of Medicine in Sousse, set a reform in medical English that will begin in the first semester of the PCEM1 for the academic year 2016-2017 and which will concern all levels of medical studies in the future, thanks to the federation of the efforts of its leaders and officials, and a clear-sighted reading of its future.

English is considered in Europe as one of the indicators of the intellectual professions. It is recognized for its facilitating interest in exchanges, collaborations and international developments by standardizing the means of communication, giving it a universal character. A valuation of medical English has to be initiated in order to improve

the perception of medical students as to the value of this teaching in order to guarantee their better adherence to this discipline (3, 5, 6, 7, 8). Therefore the introduction of medical English as one of the objectives of the National Medical Residency Contest will have an immediate impact both on the perceptions of students in this discipline and on the interest in this subject from the PCEM 1 onwards. In order to make this introduction less binding for candidates, it can be combined with residency objectives relating to the tests of the different disciplines (basic, medical or surgical). In this context, candidates may be asked, for example, to formulate in English the diagnosis, the prescription to be written, the supplementary tests to be requested, the health education and the interpretation of the complementary examinations performed. In this regard, the review of the literature finds the adoption of this formula for the introduction of medical English in the classifying national exams of several countries which have undertaken curricular reforms (3, 9, 10, 11).

On the other hand, several faculties of medicine, all over the world, favor limited duration trainings during university vacations in health care settings in English-speaking countries (Great Britain, USA or other countries) and this

for the best medical students in English declared annually as a result of the assessments and for the most brilliant and perfectionist students in the final classification by level of study. In this sense, the faculties can allocate subsidies for placements (partial or total) (2, 11, 12).

In addition, soliciting foreign teachers of medical English for workshops or involvement in debates and direct discussions with students can be of certain benefit and impact. The exchange of educational materials, especially relating to "listening and speaking" such as audio or video recordings, can be very beneficial (3, 4).

On the other hand, promising experiments found in the literature, concerning teaching in different disciplines are delivered in English and can be co-facilitated by the "clinical teacher" responsible for the discipline (mastering medical English in his or her specialty) and the faculty teacher responsible for medical English in the faculty. A foreign clinician specialist (from an English-speaking country and /or experienced in teaching the discipline in English) may be associated with this learning this will certainly be a source of motivation for the students with inestimable interest and can encourage the exchange and the coordination between countries (5, 6, 13). Finally, there is a need to notify the increased international mobility of physicians, especially specialists throughout the world, associated with the usual mobility of patients, which requires the provision of adequate and effective communication tools enabling the required care (7, 13).

### RECOMMENDATIONS:

For the reform of medical English, we consider it essential to make the following recommendations:

- Encourage national coordination between the four faculties of medicine, since the idea of introducing medical English into residency objectives inevitably implies the notion of standardization of the teaching of medical English in the curriculum of academic training of doctors. This will give this discipline a uniform and homogeneous learning, identified according to needs and achieved by common objectives. In addition, the standardization of learning between faculties of medicine may lead, on the one hand, to the standardization of evaluations and, on the other hand, to the subsequent learning certification, which gives this discipline importance and recognition. The specialty language certification strengthens doctors training curriculum and curriculum vitae through individualized diploma recognition of acquired competences, but also

has the great advantage of allowing recognition in a foreign process of communication and academic improvement.

- Adapt the content of English learning to the needs, in fact, this adequacy can be done on two levels:

- At the level of the academic training curriculum, where we should take into consideration, in the formulation of the learning objectives, the share to be allocated to the component relating to the medical practice of care, research and communication,

- At the level of postgraduate training where we should, in addition to common basic training, develop certain aspects to be encouraged due to the specific needs of professionals involved in teaching according to their specialty exercises and care practice fields.

- Strengthen collaborations with other foreign medical faculties with postgraduate training in medical English. Thus certifying and recognizing basic academic training in medical English can offer prospects to the brightest students with opportunities for enrollment in postgraduate diploma courses and possible facilitation of accessibility to these courses by medical faculties and the possibilities of managing them (totally or partially).

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### CONCLUSION

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Our study revealed many weaknesses in our English learning system and our educational strategy. In order to palliate that, we insist on the importance of national and international exchanges. Indeed, collaborations between the medical English laboratories of the intra and inter-country faculties of medicine will be very fruitful as they allow exchanges of learning facilities and methods that have proved effective, as well as the exchange of experience.

The universal common aims for this discipline are to learn English in medicine and medicine in English in order to meet common training objectives, to promote both physicians and patients international mobility, to encourage the certification of competencies in medical English and to encourage the adhesion to deepen specialized training of this discipline at the national and international levels, all within a general niche of quality of the care improvement and an international approach process of excellence and improvement of health systems.

**Aucuns conflits d'intérêts**



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