

The Importance of Studying Medical Terminology for Students in their Preparatory Year in Health Colleges: A Study at Najran University- Saudi Arabia.

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Abstract –The preparatory year (PY) plays an important role in students’ preparation for university level academic studies, since studying in medical programs is challenging and students need to be able to overcome obstacles in their studies. One way to facilitate the transition to full medical programs is to include medical terminology (MT) in the PY. The study investigates the importance of including MT in the PY for students planning to study at any of health colleges at Najran University. A cross-sectional study was designed to include at least 25 students and 12 members of teaching staff from each of the health college at Najran University. An electronic survey using Google forms was used to ask students and members of teaching staff questions related to the importance of MT in the PY for health colleges’ students. A significant number of the teaching staff mentioned that students were below the required level because of lack of English language proficiency as well as the difficulty in specialty courses is an issue. Also, a significant proportion of teaching staff and students reported that the inclusion of MT in the PY would improve students’ academic performance. MT should be introduced in the PY to facilitate the study journey for students who wish to continue in health colleges, since this will facilitate students’ understanding of medical terms and contribute in raising the level of students.

Keywords: Academic - Colleges – English Language - Health – Medical education - Preparatory year – Terminology.

1. Introduction

An understanding of the English language (EL) is very important for those studying in health-related degree programs. Accordingly, students with a non-English speaking background are at risk of poor performance [1]. To tackle these issues the concept of English for Specific Purposes (ESP) has been developed to support teachers and students.

ESP is a branch of EL learning focused on the use of English in specific professional contexts [2]. It was established in the 1980s and developed rapidly, becoming one of the most important branches of EL teaching and research globally. It has a crucial role parallel with the teaching of general English. The utilization of ESP is also especially important in non-English countries such as Saudi Arabia (SA) where the main language within high school education is Arabic.

With the growth of university places in many countries, and increasing numbers of international students undertaking tertiary studies in English, a subdivision of ESP has been developed. This branch is called English for Academic Purposes (EAP). It gained its strength from a variety of theories and a commitment to research-based language education. Several research developments have shown that in specialized fields, professional terminology and academic vocabulary have established themselves as a linguistic and educational framework for EL-teaching scenarios [2].

English for Medical Purposes is a branch of EAP referring to the teaching of English for doctors, nurses or other professionals in medical field. EMP is a customized method of teaching English when the language is to be utilized for an identifiable goal. It is designed to meet the needs of medical learners and focuses on a limited range of skills required by them such as, medical meetings, writing medical reports and preparing medical talks [3].

Regarding the language used in the medical field, even students who have had a good quality of general education in secondary school find that the technical English they are exposed to when entering medical school is like mastering a new language. Actually, for English speakers the language in medical disciplines is more like a word list than a new syntax, and this has spawned a growth in number of textbooks of medical vocabulary aimed at the English-speaking market as well as speakers of other languages. This illustrates a widespread recognition of the need for professional language teaching in the context of medical education [4]. In terms of how EMP is practiced in health colleges, Medical Terminology (MT) is increasingly taught directly to medical students. MT is the medical language that should be learnt by beginners in medical school. It is a special vocabulary used by health care professionals for effective and accurate communication. Because it is based mainly on Greek and Latin words, medical terminology is consistent and uniform throughout the world. It is also efficient; although some of the terms are long, they often reduce an entire phrase to a single word. For example, the word appendectomy concisely articulates the surgical remove of appendix. The medical vocabulary is enormous, and learning it may seem like learning the entire vocabulary of a foreign language [5].

Najran University in SA delivers a six-year undergraduate program in medicine, and five years for medical sciences collages including internship. The first year is the PY of these programs. A PY is a common approach in Middle Eastern universities to bridge the gap between general education and university. In this year, students revise all the subjects they learnt in high school as well as taking an EL course. These EL courses in the PY, however, are structured around a curriculum that aims to cover various aspects of general English, including reading, writing, listening and speaking. This reflects the fact that most undergraduates in the PY at Najran University (as with other universities in SA) graduated from SA high schools, where education is delivered mainly in Arabic, with only a very basic level of English being taught [6]. Previous work on PY students from Umm Alqura University has revealed that the majority of medical students experience difficulties with English, especially when seeking to utilize English in a medical context [7].

Many universities depend on a PY to prepare students for their academic education. This is particularly the case when teaching specialized technical subjects. All medical school in SA considered EL as the official language of instruction. While most high school education offered in Arabic therefore alteration to learning environment based on English for some students is not easy [6]. In health colleges, “basic subject” that needs to be taught is MT, since it is knowledge of this terminology that is fundamental to the smooth progress of medical studies.

This research therefore aims to investigate the importance of MT in the PY for students in health colleges at Najran University in SA.

2. Aim

To investigate the importance of including MT in the PY and its potential impact on academic performance for students planning to study at any of health colleges at Najran University

3. Specific objectives

- 1- Determine overall student academic performance in the specialty years.
- 2- Investigate whether the inclusion of MT in the PY would improve student's performance in specialty years.

4. Research questions

- 3- Were the EL courses delivered in the PY effective?
- 4- How did students perform in their academic studies without studying MT in the PY?
- 5- Would the inclusion of MT in the PY improve student performance?

5. Methods

The cross-sectional quantitative study based on a survey was carried out after getting approval from the deanship of scientific research of Najran University, Najran, SA. The survey comprised separate questions for teaching staff and students. In each case the questionnaire comprised two parts. The first part of the questionnaire, members of the teaching staff were asked about whether overall student performance was poor or good without the inclusion of MT in the PY. If the students were performing poorly, staff members were asked if that was linked to a lack of English proficiency among students. Also, teaching staff and students' opinion was taken regarding the inclusion of MT in the PY would help in improving students' academic performance or not. This was followed by a second part which posed a number of questions to teaching staff about the potential reasons for poor student performance in the academic studies, with answers allowed on a five-point Likert scale ranging from strongly agree to strongly disagree.

On the other hand, students were asked to rank the effectiveness of the English course that had been taught in the PY through a series of questions, again on a five-point Likert scale. Also, students were asked whether they felt that providing a MT course within the PY would improve their academic performance or not. That was followed by a series of questions related to the MT such as year they would like to study MT, the nature of the course and the delivery method of the course.

5.1 Instrument

Two online surveys were created and designed by researcher and distributed via Google forms to both students and teaching staff members (male and female) in the medicine, medical sciences and nursing colleges at Najran University. All of the data was collected between January and February 2019.

5.2 Participants of the Study

To obtain samples which were representative of the whole population of health colleges, the participants for this study were from the medicine, medical sciences and nursing colleges. We collected at least 25 students and 12 teaching staff responses from each collage (a total of 128 students and 76 staff), males and females. Only students who had passed the PY were allowed to participate and efforts were made to ensure that were from different stages of their degree programs within the health colleges. All the participants were students and staff from Najran University in SA.

5.3 Data analysis

In this study, data were entered in SPSS version 20, number and percentage were calculated for each variable. The significance was determined using t-test.

6. Results

Overall student performance:

In the first part of the survey, teaching staff members were asked about overall student performance in the speciality years of their programme. Figure 1 shows that the proportion of the teaching staff who agreed that the students were below the required level is significantly higher ($p=0.04$) than those who disagreed with this statement. Also, the percentage of teaching staff members who reported that the introduction of MT in the PY would improve students' performance was significantly higher than those who disagreed with that statement ($p=0.05$).

Figure 2 when staffs were asked about the reasons for students' poor academic performance, 46% strongly agreed that this was associated with the lack of an MT provision in the PY. Approximately 51% strongly agreed that poor performance was associated with students' lack of EL proficiency. Meanwhile, 32.9% disagreed that this problem occurs because of the inherent difficulty of the speciality courses. Also a clear majority agreed to some extent 41% that the difficulty of the course was an issue.

Usefulness of EL that delivered in the PY:

About 46% of students who participated agreed that EL courses were delivered to a good level in the PY. Approximately 40% reported that EL courses in PY improved their EL level. 31% found that EL course helped them in the speciality years (Figure 3).

Staff and students' opinions regarding the inclusion of MT in PY:

Both teaching staff members and students were asked about their opinion regarding the inclusion of MT in the PY. The number of both staff and students who agreed was significantly higher compared with those who were disagreed, $p=0.04$ and $p=0.01$ for staff and students, respectively (Figure 4).

Figure 5 Students were then asked about the preferable method of delivery of MT to them, with 54% preferring a traditional teaching method. In addition, 71% preferred to study MT in the PY, while 25% found it useful to study MT during the first level of speciality years.

7. Discussion

Studying medical courses is challenging [7], and preparing students to handle new specialized courses requires a very well-integrated program to facilitate the journey of study. One way to deal with academic challenges is introduce a medical education path as a transitional phase before starting the academic courses [8]. That would allow students to gain the skills they need to overcome their academic problems [8]. This path has been successful introduced in some universities in SA such as King Saud bin Abdul-Aziz University for Health Sciences KSAU-HS, which introduced a professional program to help students transition from high school to pursue their studies in health colleges [9]. Other universities have not established such a program so far, however, especially the new developing universities such as Najran University. As consequence, students have faced difficulties and have performed poorly, particularly during the first year in the health colleges. For curriculum planners' students are the most important source for identifying course and program problems. The outcomes of our study are therefore crucial in helping us to design courses that meet students' needs before they enter the health colleges.

One of these needs is English proficiency, since a lack of EL fluency is recognized as being one of the top obstacles facing medical students [10]. Several studies have reported that there is association between EL proficiency level and student achievements. For instance, nurses from non-English speaking backgrounds are

more likely to fail compared with others from English speaking backgrounds, since English proficiency is important in overcoming difficulties with studies in these disciplines [1]. This finding is analogous to the responses from the teaching staff in our study, in which 50% strongly agreed that lack of English proficiency is linked with lower academic achievements of students. Also, in Australian universities, researchers have found that a lack of English fluency is associated with students' poor performance in medical colleges [10]. This finding parallel with our staff responses as the number of staff agreed that poor student performance is associated with poor EL proficiency is significantly higher than those who disagreed ($p < 0.05$). Although, about half of the students in health colleges agreed that the English courses they were taught in the PY were delivered to a good level and helped them to overcome their academic obstacles, more than 50% of teaching staff felt that the English course in the PY did not improve students' performance in health colleges. English language course that taught for students in the PY at Najran University was designed for all students who admitted to the University regardless about the disciplines they wish to pursue. Although this course of EL was useful it does not help in students' academic progression in medical specialty courses.

Students who entered health collages required to improve their EL skills including speaking, writing, reading, listening as well as they need more specific English courses such as MT [11]. According to our study results, the majority of teaching staff and students from all health colleges felt that MT would definitely help to improve students' academic performance. On this basis, the addition of an MT element within the PY should be considered, at least as a temporary solution until a dedicated medical path within the PY can be designed.

8. Conclusion

Medical studies are challenging specially for non-English speaking background, since all the subjects in health colleges are delivered in EL. Students therefore need to be well qualified before starting their academic studies. After recording students and staff opinions regarding MT, it was found that MT should be introduced in the PY to facilitate the study journey for students who wish to continue in health colleges. An MT program would facilitate students' understanding of medical terms, thus contributing to improving their academic performance.

9. Recommendations

According to the results we recommended that it is important to include the MT subject within the PY for students who wish to continue in any of the health colleges.

10. Acknowledgments

The authors are thankful to the Deanship of Scientific Research of Najran University for funding this work through grant research code NU/MID/16/051.

11. Conflicts of interest

Authors declared they have no conflicts of interest.

12. What is already known on this topic

- Lack of English proficiency is an obstacle for some students who are studying in health collages.
- Students from on-English speaking backgrounds are more likely to fail in health collages since all the subjects delivered in English.

13. What this study adds

- Teaching staff found that students in health collages are below the required level because of lack of English proficiency.

- Interdicting medical terminology in the preparatory years would facilitate the academic obstacles and improve students' performance in their specialty years (from students and staff point of view).

14. Authors' contributions

- Khlood Mehdar: She has made substantial contributions in bringing the idea of the importance of medical terminology for students in health collages; she wrote the proposal and participated in analysing and interpretation of data.
- Nagla Bashab: She involved in questioners designing, she wrote the background section, drafting the manuscript and critically revising it for essential academic content.
- Albosairi Ahmed: He participated in designing of the questioners, he ensuring that the questions are appropriate for the investigation and he wrote the methodology section, Also, he revises the final version of the manuscript.

15. List of figures

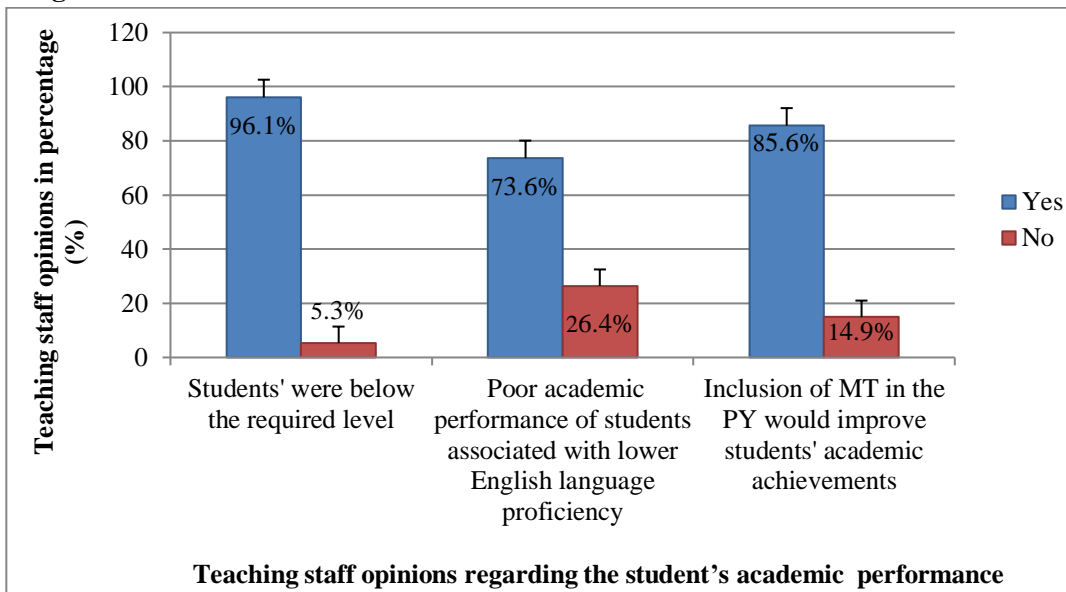


Figure 1: Percentage opinions of teaching staff members regarding students' academic performance and the impact of EL proficiency and MT on this performance (N= 76). Statistical analysis was t-test (* p <0.05, & ns >0.05). Error bars represent standard deviation (SD).

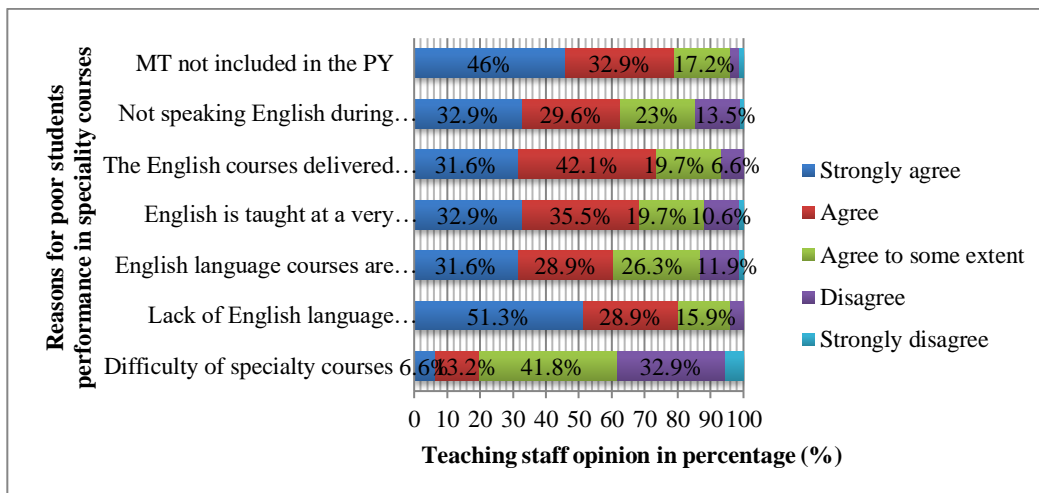


Figure 2: Teaching staff opinions regarding the reasons for students' poor performance in specialty courses (N=

76).

EL proficiency is considered the main cause of poor student performance from a teaching staff point of view, followed by not including MT in the PY

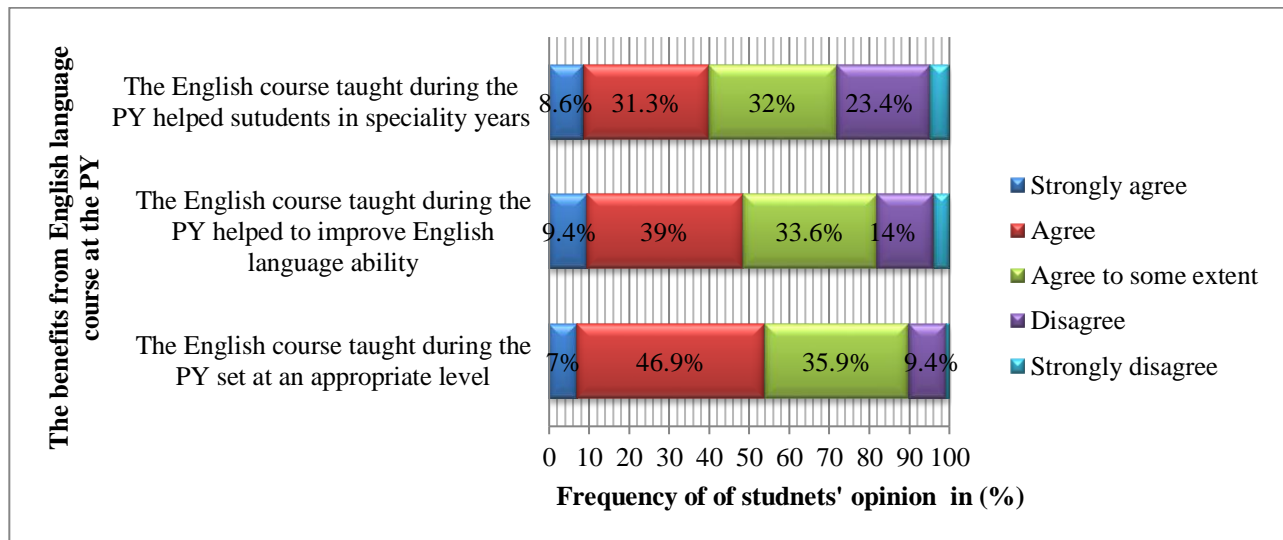


Figure 3: Heath college students' opinion regarding the benefits arising from EL courses delivered during the PY (N=128).

The figure shows that more than two thirds of students found English course taught during the PY to be useful.

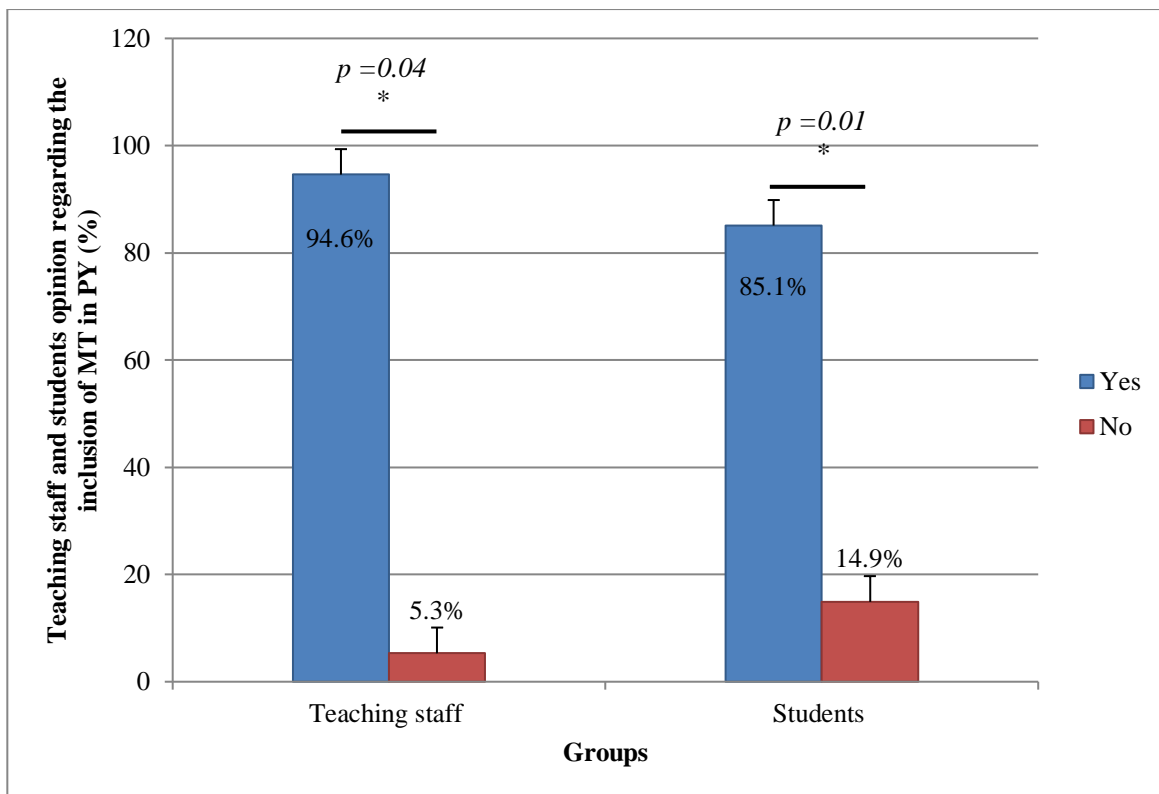


Figure 4: Teaching staff and students' opinions regarding the inclusion of MT in the PY. There were 76 teaching staff members and 128 students.

Statistical analysis was carried out using the t-test (* $p < 0.05$, & ns > 0.05). Error bars represent standard deviation (SD).

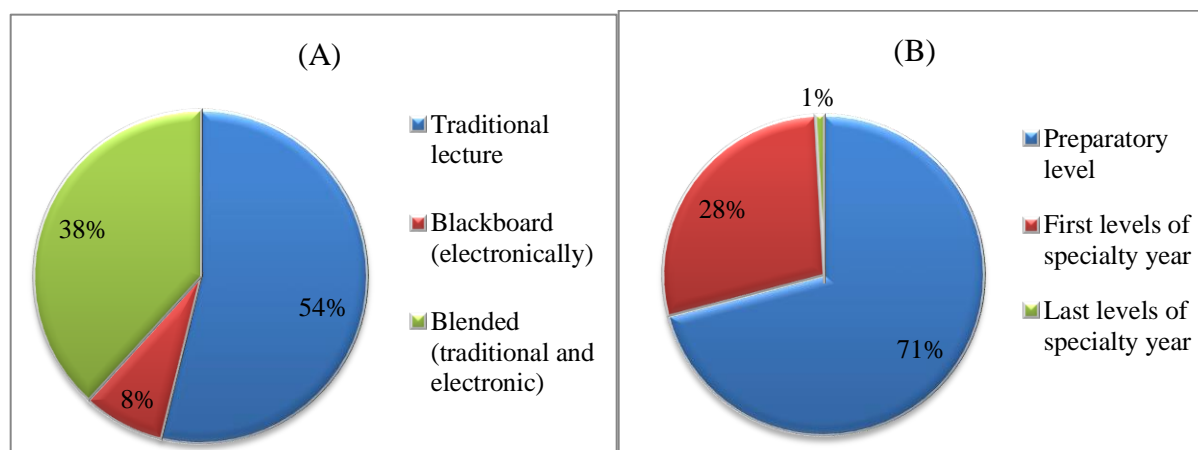


Figure 5: Students' opinions regarding the teaching methods and year of delivery of an MT course (N=128).

(A) The preferable method to deliver MT subject to students; 54% preferred the traditional method. (B) The preferable academic level for studying MY; 71% preferred to study MT during the PY.

16. References

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