

# DOES THE LEVEL OF KNOWLEDGE DELIVERED IN 'ENGLISH IN DENTISTRY' AFFECT THE QUALITY OF FUTURE DENTAL EDUCATION?

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Background: It is well recognized that English, as a second language, increasingly plays an important role in many international dental meetings, associations and publications. International dental collaboration also requires a high standard of dental English proficiency. The current educational system in the Faculty of Dentistry in Damascus University has emphasized on delivering dental education in Arabic. English as a subject is taught in the faculty to undergraduates in five semesters. However, effort is spent on understanding grammar, teaching dental terminology and translating text from English to Arabic. The Faculty is currently engaged in significant curricular reform in order to meet the demands of ever-growing dental knowledge. It is essential to identify English learning needs in dentistry in order to develop the curriculum. Therefore, this study was undertaken to investigate attitudes of undergraduates to learning 'English in Dentistry' and assist the identification of what is needed from teaching 'English in Dentistry' as a topic in order to improve the quality of dental education. Materials and Methods: A questionnaire was designed and distributed to 115 undergraduates in the faculty of dentistry. It contained four items which aimed to explore students' attitudes to current English learning provided by the faculty, reasons for learning and improving 'English in dentistry', barriers to learning it, and methods for improving learning and teaching. Results: The response rate was 93 % (107/115 questionnaires). About 98% of students considered learning 'English in Dentistry' in the faculty an important and wanted it to be improved. The majority (88%) answered that they need it to travel abroad to obtain higher education. About 97% of students reported that they need it to improve their scientific standards, 96% thought that this would be necessary to read scientific articles, 90% and 70% of students thought that this would be desirable to attend/ present lectures in international dental meetings respectively. Interestingly, 40% of students wanted to learn 'English in dentistry' to be able to write and publish in international journals and 35% wanted it to be able to critically appraise scientific articles. This has not been previously raised. Assessment of barriers to improving 'English in Dentistry' in the faculty revealed interesting results. The highest percentage of students (69%) indicated that the burden of other dental topics in each semester prevented them from improving their knowledge in 'English in Dentistry'. About 22% of students believed that there is no time to learn 'English in Dentistry' and that the dental curriculum is not designed to efficiently allocate time for improving English. With regard to questions dealing with methods of improving teaching and learning of 'English in Dentistry', 69% of students wanted other dental subjects to be taught in both Arabic and English so they can improve their dental terminology, About 5% of students suggested exchange of students and staff as a method for improvement. Conclusion: Obviously, increased students motivation and positive attitudes to learning 'English in Dentistry', require greater insight into the quality of the current delivered subject. The present study provides evidence to dental educators to consider improving methods of teaching and learning 'English in Dentistry' to produce a competent dental graduate who is fit for 21st century and can fulfill the requirements of leading dental schools in the world.

Keywords- English language, dental education, student, attitude, curriculum.

## Background

The Faculty of Dentistry in Damascus University is currently engaged in significant curricular reform in order to meet the demands of ever-growing dental knowledge.

Academic members in the faculty have assessed the possibility of adopting curricular requirements recommended by "Association for Dental Education in Europe" ADEE[1] and agreed that the future of dentistry in Syria will depend on the production of educationally, qualified culturally competent and ethical dentist who is a critical thinker, has good communicative skills, trained in biomedical science, prepared to undertake continuing professional development and who is able to practice evidence-based comprehensive dentistry[2].

Academic members have also discussed the barriers that could currently limit pursuing internationally recognized standards (competencies) in dental education. One of the key barriers, which have received much attention, is the language barrier.

Syrian education leaders believe that educational programs should be delivered in Arabic and adopting Arabic in educational system would be fundamental to the society cohesion and identity. Therefore, the current dental curriculum in the Faculty of Dentistry is delivered in Arabic. English as a subject is taught in the faculty to undergraduates in five semesters. However, effort is spent on understanding grammar, teaching dental terminology and translating text from English to Arabic.

It is important to identify whether the current English delivered would assist the faculty in meeting the international standards, and to detect English learning needs in dentistry in order to guide the curriculum development. This study was undertaken, to explore students' attitudes to current English learning provided by the faculty, reasons for learning and improving 'English in dentistry', barriers to learning it, and methods for improving learning and teaching. The study also aimed to assist the identification of what is needed from teaching 'English in Dentistry' as a topic in order to improve the quality of dental education.

## Materials and Methods

A questionnaire was designed, piloted before use and randomly distributed to 115 undergraduate students in the third (n=25), fourth (n=35) and fifth year (n=55) from the faculty of dentistry of Damascus University. Participation was voluntary and anonymous. The questionnaire was offered to students at the end of their semester and it was provided in Arabic. It contained four items which aimed to explore students' attitudes to current English learning provided by the faculty, reasons for learning and improving 'English in dentistry', barriers to learning it, and methods for improving learning and teaching. The questionnaire had twenty multiple choice questions. The student could respond with 'yes' or 'no' as shown in Table 1. If the students did not select any option, data were categorized as "no response". In addition, four open-ended questions at the end of each item were developed to obtain further information. Data were entered and analyzed with Statistical Package for Social Sciences SPSS, 17(SPSS Inc, Chicago, IL, USA). Numbers of participants together with corresponding percentages were calculated. The chi-squared tests were also utilized to detect differences between all three student groups (third year=17, fourth year=35, fifth year=55). *P*-value of less than 0.05 was considered statistically significant.

## Results

The response rate was 93 % (107/115 questionnaires). The participation included 17 third year, 35 fourth year and 55 fifth year students. About 103(97%) of students were interested in learning 'English in Dentistry', considered it an important and wanted it to be improved. Only 4(3%) of students were not interested in learning as they were studying French. "Fig .1" presents the reasons for interests in improving 'English in Dentistry'. The majority (88%) answered that they need it to travel abroad to obtain higher education. About 103(97%) of students reported that they need it to improve their scientific standards, 101(96%) thought that this would be necessary to read scientific articles, 97(90%) of students thought that this would be desirable to attend and understand English- speaking visitors, 93(88%) of students wanted

the topic to study abroad and set international exams, and 70% to present lectures in international dental meetings. Interestingly, 43(40%) of students wanted to learn 'English in dentistry' to be able to write and publish in international journals and 37(35%) wanted it to be able to critically appraise scientific articles. About 75(71%) of students wrote in the last option that they wanted 'English in Dentistry' to be able to pass dental exams with higher marks. Each of the student groups provided similar responses. No significant difference was noted.

Table 1. questionnaire for dental undergraduates

|   |     |    |             |
|---|-----|----|-------------|
| 1. Are you interested in learning English in Dentistry?<br>If no, please specify the reason   | Yes | no | no response |
| 2. Do you feel that the currently 'English in Dentistry' delivered in the faculty should be further improved?<br>If yes, then for what reason(s)? | Yes | no | no response |
| To improve scientific standard in dentistry.  | Yes | no | no response |
| To be able to read scientific articles.   | Yes | no | no response |
| To write and publish in scientific journals.  | Yes | no | no response |
| To critically appraise articles.  | Yes | no | no response |
| To understand English speaking visitors.  | Yes | no | no response |
| To attend and present in international conferences.   | Yes | no | no response |
| To study abroad and set international exams.  | Yes | no | no response |
| Other reasons (please explain in the provided space).   |     |    |             |
| 3. In your opinion, is there any barrier prevents you from improving' English in Dentistry?<br>If yes, then please specify                        | Yes | no | no response |
| No time to learn English in dentistry.  | Yes | no | no response |
| Burden of other dental topics.  | Yes | no | no response |
| Not interested because learning is not useful.  | Yes | no | no response |
| Other barriers (please specify in provided space).  |     |    |             |
| 4. Do you suggest any method for improving teaching and learning' English in Dentistry'?<br>If yes, then please specify                           | Yes | no | no response |
| Do not know.  | Yes | no | no response |
| Learning the topic in teams.  | Yes | no | no response |
| Student exchange.   | Yes | no | no response |
| Staff exchange.   | Yes | no | no response |
| Deliver dental education program in English and Arabic.   | Yes | no | no response |
| Deliver dental education in English only.   | Yes | no | no response |
| Other methods (please specify).   |     |    |             |

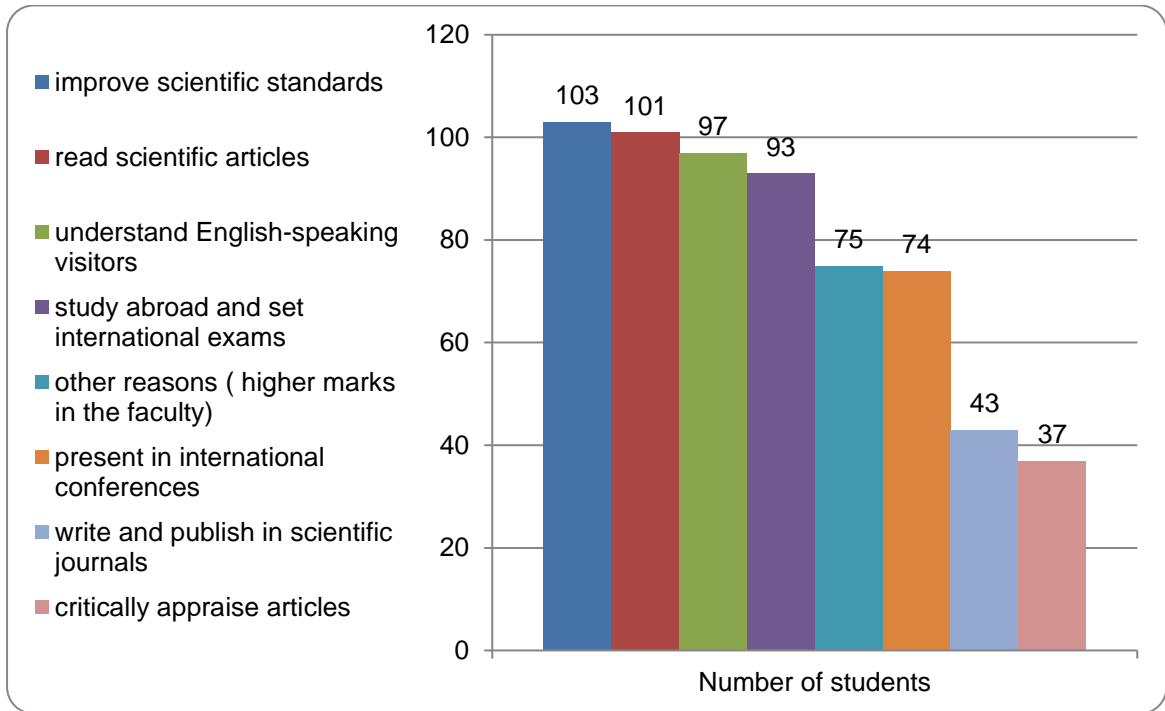


Fig.1. The reasons behind improving 'English in Dentistry'

"Fig. 2" shows the assessment of barriers that limit improving 'English in Dentistry' in the faculty. The highest percentage of students (69%) indicated that the burden of other dental topics in each semester prevented them from improving their knowledge in 'English in Dentistry'. About 22% of students believed that there is no time to learn 'English in Dentistry' and that the dental curriculum is not designed to efficiently allocate time for improving English. Only 9% of students indicated that they were not interested in learning 'English in Dentistry' as they were learning German or French. Responses of the three classes of students were not significantly different.

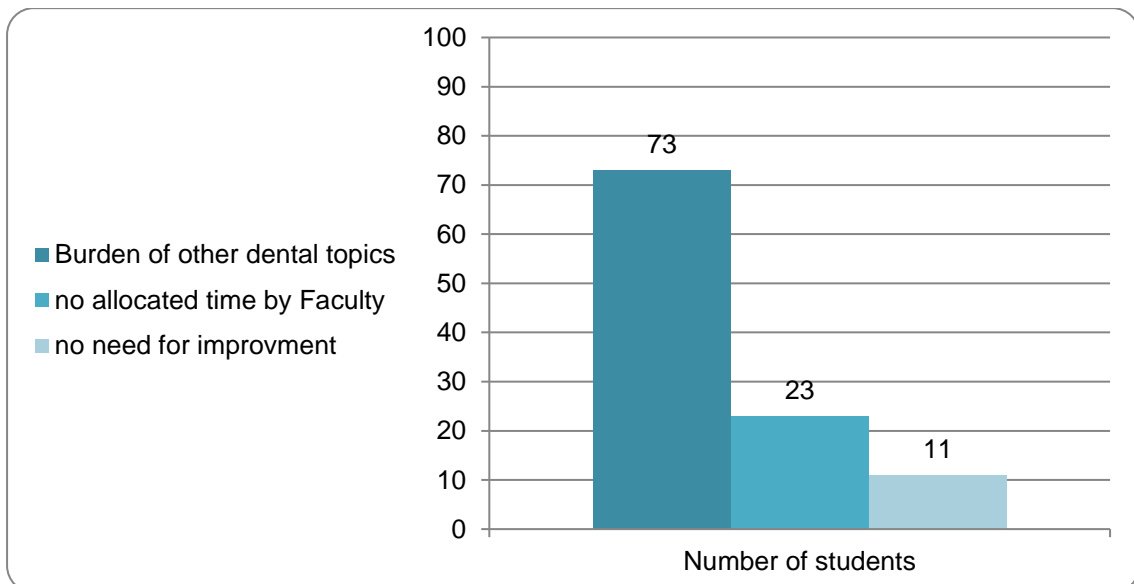


Fig.2. Barriers limit improving 'English in Dentistry'

Findings dealing with methods of improving teaching and learning 'English in Dentistry' are presented in "Fig. 3". A total of 73(69%) of students wanted other dental subjects to be taught in both Arabic and English language so they can improve their dental terminology. Only 13(12%) of students wanted the dental curriculum to be delivered in English. About 5(5%) of students suggested the exchange of students and staff for improvement. Only 3(2%) of students suggested learning in groups so they can improve their dental vocabulary and communication. The responses of the three classes were not significantly different.

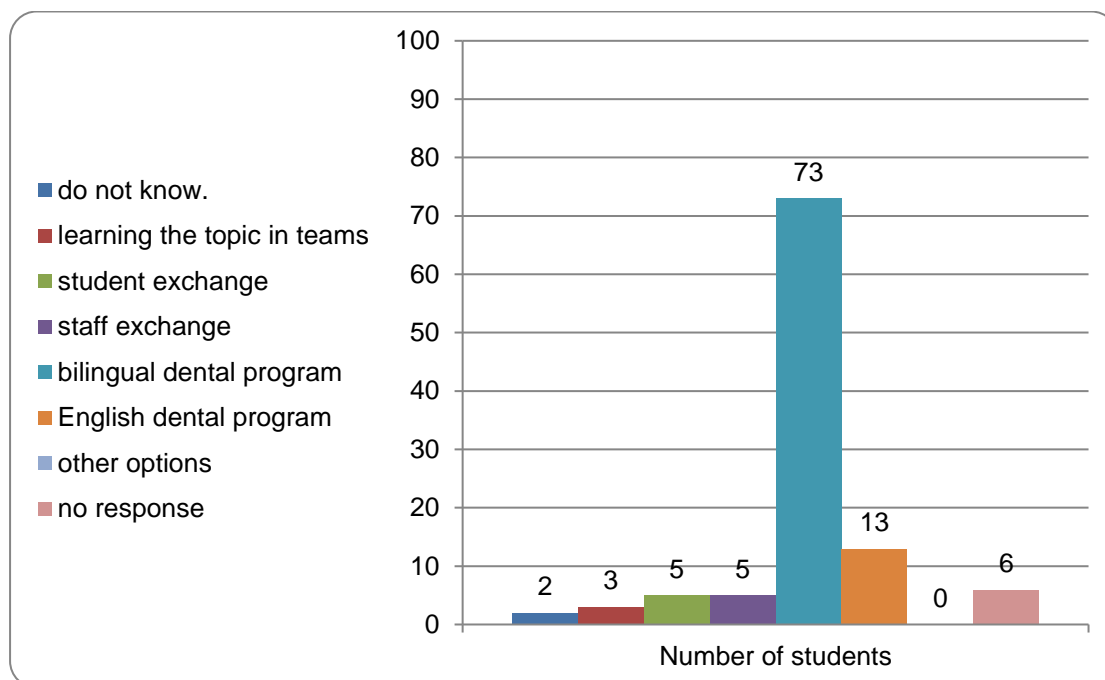


Fig.3. Methods for improving teaching and learning 'English in Dentistry'

## Discussion

Our present study is the first to investigate students' opinions towards their learning in the Faculty of Dentistry in Damascus University. Many studies in the faculty have been undertaken to assess the current curricula. These include investigating alumni self-perception of their training and competence, assessing attitudes of stakeholders towards dental education of Syrian graduates and undertaking study about patients' satisfaction towards preventive and treatment procedures provided by the faculty. However, there has been no previous effort to determine the opinions of students in the faculty of dentistry towards their dental education.

Students' perceptions of their education have received much attention in the United States by dental educators. Henzi *et al* (2005) have addressed the importance of taking opinions and recommendations from the other side of the table- from students who consume the education 'meal' served to them, As the old saying goes, 'If you are serious about evaluating the quality of the meal, you do not ask the chef; you ask the people who paid for it and who ate it'[3].

Dental educators in the Faculty of Dentistry in Damascus University have focused on teaching grammar, dental vocabulary and translating dental text books to Arabic. In this study, it might be surprising to see the positive attitudes among undergraduate students towards learning 'English in Dentistry' and that students would like the faculty to improve the topic.

We found that ninety- seven per cent of students wanted the current 'English in Dentistry' to be improved in order to be able to develop their scientific standards, read, write and appraise scientific articles, attend and present in international conferences, study and set international exams and understand English speaking visitors.

The dental students who participated in this study noted that learning 'English in Dentistry' was inefficient and that the burden of other dental topics in each semester prevented them from

improving their knowledge and believed that there is no time to learn 'English in Dentistry' and that the dental curriculum is not designed to efficiently allocate time for improving English.

The participants in this study suggested methods for improvement such as delivering a bilingual curriculum, learning in groups, students and staff exchange.

The results from the present study contribute to the literature as they identify areas of strength and weakness of students' attitudes towards 'English in Dentistry'.

Whilst the current educational system has emphasized on delivering educational programs in Arabic as this would be fundamental to the society cohesion and identity, English has to be considered as a second language that plays an important role in many international dental meetings, associations, and publications. This would assist better adjustment and academic achievement for international students [4] and would facilitate international collaborations and mobility to establish quality faculty development opportunities [5].

'English in Dentistry' is an area which has received little attention in literature. It was first introduced in Japan by Morse and Nakahara (2001) who addressed the importance of 'Dental English' and suggested methods for teaching dental English to speakers of other languages. They have noted that half of educators did not know how to correctly teach 'English in Dentistry' to speakers of other languages even they believe that dental English is essential to understand the dental literature, for globalization and to treat foreign patients [6].

Morse and Nakahara (2001) have provided some suggestions for improving 'English in Dentistry' in Japanese universities in which English is not the first language. They have suggested providing better facilities, equipment, materials, smaller classes or more teachers, native speakers, and separating students with different abilities [6].

It is necessary to ascertain students' needs, consider new materials and methods for teaching and learning 'English in Dentistry', allocate sufficient time for learning, and reinforce the role of students. This will demonstrate the sincere interest in developing the current dental curriculum and would be a step towards the professionalism in the field of teaching 'English in Dentistry'.

Future studies, with a larger sample size, that include dental postgraduate students are still required. Also, new insights into this subject may be obtained by investigating the attitudes of Syrian students, who continued their studies abroad, towards 'English in Dentistry'. Such a study might provide fruitful outcome, identify other areas of strength and weakness and might suggest new learning methods for improvement.

## **Conclusion**

Obviously, increased students motivation and positive attitudes to learning 'English in Dentistry', require greater insight into the quality of the current delivered subject. The present study provides evidence to dental educators to consider improving methods of teaching and learning 'English in Dentistry' to produce a competent dental graduate who is fit for 21st century and can fulfill the requirements of leading dental schools in the world.

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