

Teaching in English for the Undergraduates: A challenge for effective learning?

Ayse Basak Cinar

Department of Community Dentistry, School of Dentistry, University of Copenhagen

During the spring term in 2010, I taught parts of the Community Dentistry for the first time (six lectures, two classes) referring to Epidemiology lectures under the undergraduate curriculum of the School of Dentistry. Each class was presented mainly in English but students were free to ask and present their assignments in Danish; each lecture was supported by a Danish colleague working as an associate professor in the department. After cessation of lectures there was criticism by the students that the content was not in line with those during the previous years. After declaring that the content was exactly the same, students criticized that the lectures were in English and they could not understand. Therefore, I decided to assess the attitudes of students to learning in English medium by self-reported questionnaires during the lectures in autumn 2011. I would concentrate on basic principles of pedagogical teaching and try to make lectures more effective and interesting by activating student participation. This project aims to assess the attitudes of dental undergraduate students towards learning dental lectures in English at the School of Dentistry, University of Copenhagen. As a sub-goal, some approaches to increase student active learning and participation are discussed.

Introduction

The General Assembly of the Association for Dental Education in Europe agreed profile for the new European Dentist as follows:

On graduation the new European dentist should:

- Have had a broad academic dental education and be able to function in all areas of clinical dentistry
- Be trained in biomedical science
- Be able to work together with other dental and health care professionals in the health care system
- Have good communication skills
- Be prepared to undertake continuing professional development supporting the concept of life-long learning
- Be able to practice evidence-based dentistry based through a problem solving approach, using basic theoretical and practical skills

Competences for a dentist at the graduation should be supported by an ethos of achieving continuing professional development and promoting life-long learning to achieve a continuum of education from undergraduate to retirement along with a desire for self-improvement. It is also worthwhile that on graduation, the dentist must be competent at demonstrating appropriate information literacy to acquire and use information from library and other databases and display the ability to use this information in a critical, scientific and effective manner. A dentist should also demonstrate an ability to maintain his/her professional knowledge and understanding throughout their professional life. Evidence-based dentistry is the major tool in successful achievement of these competencies and skills. Evidence comes from mostly the international scientific articles, books and conferences; majority of those is in English. English also performs a common worldwide platform for scientific learning, discussion, exchange, and communication in the respective field. Therefore this language may be referred as a common scientific language to learn and to continue professional development.

In addition, universities and academies are joining academic consortia, such as SOCRATES, ERASMUS and LINGUA; more and more countries are joining the Bologna agreement, which aims at creating an all-European higher education and research area. The European Credit Transfer System is being implemented to make students exchange easier. The Bologna Process aims to create a European Higher Education Area, in which students can choose from a wide and transparent range of high quality courses and benefit from smooth recognition procedures. The process has been started with Bologna Declaration in 1999. English is a common language in achievement of the respective goal. Denmark is an active member of Bologna Process. The internationalization of education and training is high on the political agenda in Denmark, and government, labor market bodies

and educational institutions are active in the field of international cooperation.

Under the light of all these issues, an undergraduate student needs to have discipline-related analytic and problem solving skills in English and as well he/she needs to assess professional knowledge in this language. However, the language skills of the dental students may be insufficient in the respective field and therefore they may have problems of speaking and/or understanding scientific language in English. On the other hand, the students may have negative attitudes towards learning in English due various reasons such as not seeing any point in learning English. Undergraduate education is mostly clinical treatment oriented that students have limited opportunities to learn the different perspectives of dentistry such as analysis of scientific publications, assessment of psycho-social dimensions of the profession. Therefore due to either on clinical treatment focused training or insufficient English proficiency skills, dental students may have negative attitudes towards English learning medium.

It is worth to notice that even today 30% of Copenhagen Business School (CBS) degree programmes are taught in English along with 188 short English-medium courses, students have expressed dissatisfaction with the English language of the teaching staff, and this poses a threat to CBS's ability to ensure high academic standards. The Danish government's strong commitment to internationalization and CBS's ambition to be an internationally recognized business university at European top level will lead a further increase in the number of English-medium degrees in the coming years. Even the School of Dentistry, University of Copenhagen as well aims to internationalize and be among the recognized international dental schools, the attitudes of students and teachers seem to be negative towards English learning medium. Therefore, I wished to examine the attitudes and perceptions of the students to my lecture which was in English. Self-assessed questionnaires will be used as measurement tool for data collection which will take place during the lecture entitled "Compliance" in late September.

Aim of the present project is to assess the attitudes of dental undergraduate students towards learning dental lectures in English at the School of Dentistry, University of Copenhagen.

Methods

The design of the lectures

Formally, the lecture “Compliance”, composed of two lectures (120 minutes, 45 minutes with a two-months break between), was part of Cariology course for the fifth semester students in 2011, September and November 2011. Each lecture was designed based on the principles of pedagogical teaching principles learned during the “adjunktpædagogikum” course (2011-2012), the University of Copenhagen. The lectures were presented in the format of theory background, interactive learning and peer discussion along with scenario playing and videos. At the beginning of each lecture, intended learning outcomes (ILOs) were introduced (Fig. 22.1). Teaching theory and research has shown that deep learning largely depends on being clear and the students’ motivation. Therefore, the theoretical part was introduced in concise and clear power point slides. Peer discussion groups, animations, simple questions and relevance to the use in clinics/dentistry (before and after ILOs) (Fig. 22.2) were used for increasing student motivation. Institutionalization was achieved by adjusting the topic for the use of clinical practice.

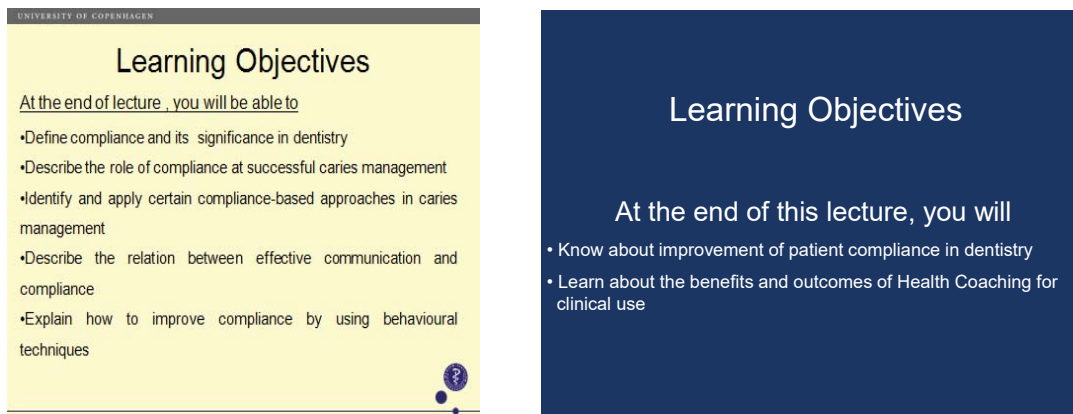


Fig. 22.1. ILOs for Compliance I and Compliance II.

One week before both lectures, the content and the relevant literature were logged on Absalon and students were asked to read those as a task. The significant parts on literature was bolded and students were reminded to read “at least” those sections to be ready for the lectures. Students were welcomed for any comments or suggestions on the content of the lecture.

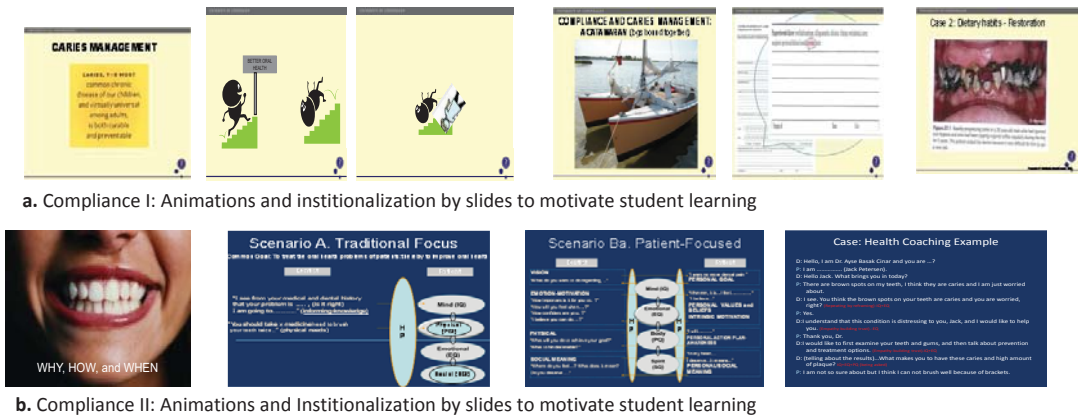


Fig. 22.2. Compliance I and Compliance II.

A guest speaker at the field of professional coaching was invited for the second lecture to have role play about coaching and as well to create dynamic platform for students, alike “business meeting days” to motivate and to enable learning. First lecture was 2 hours whereas second one was 45 minutes. Both lectures were on Friday afternoon.

Questionnaires to assess the students perceptions

Prior to initiation of the first lecture, the questionnaires were distributed in the class, and students were asked to fill in the break; most returned before. Among the participating students (n=19), 18 of them replied. Questionnaires were about socio-demographic variables (age, gender, nationality, language on primary education) and attitudes towards the respective lecture topic (Compliance-8 items) and lectures in English (11 items) on a 5-point Likert Scale (Appendix A). The answers ranged from strongly disagree(-2) to strongly agree (2) for the positive ended questions (Compliance: items 1-4, 8; Learning in English: 1-3,5,6,) and the reverse coding was applied for the negative-ended. The Cronbach alpha for reliability of scale for “Compliance” was 0.85 and it was 0.54 for the scale “Learning in English”. Sum scores for both scales were taken and the means were assessed as the cut off points (Compliance:7,7; Learning in English: 4,5). Additionally, the difficulty to study in English was assessed by the question “How difficult or easy is it to study in English compared to studying in your first language?”

Descriptive statistics, Chi-square tests by cross-tabulation and Spearman correlation were used to analyse the data. Statistical significance was set at $p < 0.05$.

Results

Among the respondents, 89% were females ($n = 16$) and 84% were Danish ($n=15$). The mean for age was 22.1 ($SD = 1.6$).

Students mostly believed (61%) that in order to be a good dentist, they needed to have good dental English proficiency to follow up the current developments and innovations in dentistry (Fig. 22.3). More than half of the students reported that they disagree with the statements “it is not easy to follow the instructions in English” (66%) and “I have difficulties at analytical thinking and problem solving in English” (56%). The students who reported it was “more difficult” to study in English compared to studying in their first language was at 58% whereas for 36% of them it was “same difficult”.

Among the participating students, 62% (above mean) reported positive attitudes towards learning in English and learning about Compliance. Both attitudes towards were positively correlated with each other ($r_s = 0.53$, $p < 0.05$). Those who reported learning about compliance was important were more likely to be positive towards learning in English (82%, OR = 11, 25: CI: 95% 1.19-106.1-0.95). Having positive attitudes towards learning in English was positively correlated with thinking that it was same or less difficult to study in English compared to studying in their first language.

Discussion and Conclusion

The findings revealed that the undergraduate dental students had positive attitudes to the lecture in English and they mostly believed that professional English proficiency is one of the competencies to be a skilled dentist. Being able to follow the instructions easily in English and not having difficulties at analytical thinking and problem solving in this language were reported more than half of the students. These are in line with the findings of a survey by the Danish Evaluation Institute among Danish undergraduate students (Evalueringsinstitut 2010). The survey has also found out that regarding the lectures in English, the majority of Danish students found the situations/tasks (class discussions, lectures, working in groups, etc.) “predominantly easy” or “easy”. All this may lead to the question how to improve the analytic skills and competencies of all dental students, including those who had negative attitudes towards learning in English, to enable getting the best from lectures in English. One solution may be the arrangement

ITEM	DISAGGREE (%)	NEUTRAL (%)	AGREE (%)
1.Lectures in English improve my ability to assess the international scientific literature.	22	33	45
2.Lectures in English will facilitate my communication in international scientific media (e.g. congresses, meetings, seminars)	11	22	67
3.In order to be a good dentist, I must have good dental English proficiency to follow up the current developments and innovations in dentistry.	0	39	61
4. I can't see the point in learning lectures in English	56	33	11
5.I think it's really useful learning scientific terminology in English for the dental degree	11	17	72
6. Lectures in English will improve my professional skills; thus will help me to be respected by my national and international colleagues	22	33	44
7. It is not easy for me to follow the instructions in English	66	17	17
8.I have difficulties at analytical thinking and problem solving in English.	56	22	22
9.I don't need professional English skills to be a dentist	55	28	17
10.The use of English in learning dentistry is obvious but I can't be bothered to turn up to lectures in English	55	28	17
11.Compared to the lectures in my first language, I participate less in discussions during lectures in English.	22	17	61

	Easier %	The same as in my first language %	More difficult than in my first language %	Much more difficult than in my first language %
How difficult /easy is it to study in English compared to studying in your first language?	0	36	58	6

Fig. 22.3. Frequency distribution of items of the scale "Learning in English" and answers to the question "How difficult or easy is it to study in English compared to studying in your first language? ($n = 18$)

of undergraduate courses for professional use of English in Dentistry alike the examples for the postgraduates. That is supported by a Swedish study among the academic staff and students of Stockholm University, that both groups indicate that they would appreciate professional English support to use it as an academic language (Bolton & Kuteeva 2010).

It is noteworthy that students in the present study, to a moderate extent, were mostly aware that they needed professional English to assess the literature and to increase their dental competencies. This, to some extent, is in line with the findings of a Swedish study that more than half of the undergraduate students thought that the lectures should not be taught only in Swedish (Bolton & Kuteeva 2010). Participating dental lectures in English, where the scientific jargon and terms are presented, will facilitate reading the literature in English; thus will lead to better assessment and use of knowledge. There seems to be a need for increasing the awareness on significance and utility of English at professional life by some courses/seminars. The lack of total awareness for the need of professional English proficiency may be due to that dental students are mostly trained on clinical perspective, focusing on treatment, and therefore the broader dimension of profession are inadequately taught (psychosocial dimensions: dentist-patient communication skills, assessment of patient's health behavior; how to assess and criticize the evidence and international literature). This is a common debate that dental sciences should move forward from clinic-oriented biomedical approach. If this can be achieved then the need and significance of learning in English will be easier to assess.

More than half of the students (58%) reported that it was "more difficult" to study in English compared to studying in their first language. This was higher than the frequency found by the survey (Evalueringinstitut 2010) among Danish undergraduate students (40%). However, in the present study, those thinking that it was same difficult as in their native tongue (36%) were less than those at the respective Danish survey (47%). One explanation might be that the undergraduate dental students in the present study are not used to take lectures in English; thus making their adaptation to learning in English harder. As concluded in the studies by Airey and Linder (2006), and Wilkinson (2005), there is a need for improving students' coping strategies and developing new teaching approaches for the adaptation of students to lectures in English. That will require collaborative effort of teachers, and students' spending more time on for adaptation of new strategies. Students' perceptions for the comparative easiness of studying in English were correlated with their positive attitudes towards

learning in English, which was correlated with the positive attitudes towards the lecture. Thus seems that facilitating effective learning in English may enhance positive attitudes to learning in English therefore to learning the respective lecture.

Based on the comments of the students at the questionnaires, learning the dental lectures in English does not seem to be a problem for students; thus the lectures need to be brief, concise and high quality in content. Thus may be achieved by consulting with other lectures and students about the content, focusing on the professional needs and expectations of the students and applicability of the knowledge in clinical practice. However, there seems to be another major challenge at conducting lectures in English. Based on professional experiences of the colleagues and self, the dental education board of the school seems to be not on the side of providing lectures in English. It is striking that the last experience is that the education board denies my teaching in English regarding the possibility that there may be increased drop-out in number of students participating to the lectures in case the lecture is to be in English. The reasoning is not the quality or content or teaching skills, therefore it may be a big challenge how to increase the quality of teaching if the issues not directly relevant to content and methods of teaching were taken into consideration. This may be explained by a survey in University of Copenhagen (Jensen et al. 2009) that has found the teaching staff at Health Sciences, mostly thought a) teaching through English would result in reduced learning outcome for students b) increased use of English in higher education threatened Danish as an academic language. On the contrary, same staff mostly agreed that increased amount of English-medium teaching would lead to higher academic standards and improved competitive capacities internationally.

English is the common language for professional use and improving respective competencies and skills in dentistry. There has been a global trend by international education board and authorities that there should be common guidelines and principles for teaching the profession; a tendency to create a quality based European higher education and research area in a common language (English). It is questionable to raise the quality and to keep up-date the scientific learning if the students are prohibited from learning in English.

In conclusion, the present study has shown that students mostly have positive attitudes towards learning in English and that they are aware that they need English professional skills to become competent dentists. There is a need to set up the study at a larger scale to have the general view

and perceptions of the students. It may be beneficial to assess as well the attitudes of lecturers and relevant professionals towards teaching in English, as teaching and learning is a whole. However, conducting some lectures in English for professional use is an inevitable requirement in today's world that there is a tendency to unite globally in science and education; thus may speak for a need for common language for effective communication.

In brief, based on the experiences from these two lectures, there seems to be a need for designing dental lectures in English in a specific format regarding solutions for overcoming the challenges for analytical and problem solving skills of students in English and allowing more time and space for students to think and discuss. When lecturing in the students' second language, the lectures designed based on the recommendations by (Airey & Linder 2006), as listed below, may improve learning environment in English. Some of these were experienced during my lectures and it was observed that they were positively working:

- Discuss the fact that there are differences when lectures are in a second language. Instead of discussion, students were told that the lecture would be in English alike in international congresses and asked to feel relaxed as English was nobody's native language in the class. Students were asked to ask any questions whenever they did not understand or had a question. This seemed to make students comfortable most probably due that they felt lecturer had empathy to understand them.
- Create more opportunities for students to ask and answer questions: Peer-discussion groups, simple interactive questions and "green-red" cards for "yes-no" answers were used for effective participation of students. Students seemed to like this methodology of "ask-answer". I recommend using short, small-group discussions within a lecture to come up with answers to questions and to generate new questions. These small groups allow students to check their understanding without pressure of direct interaction with the lecturer or the class. If the students are reluctant on answering, then green-red cards for yes-no answers may be a good start for active participation.
- Allow time after the lecture for students to ask questions. Being available for informal questions at the end of the lecture allows students to come forward and discuss problems more freely. Students were eager to discuss and talk more about the lecture after it was finished.
- Ask students to read material before the lecture: A good strategy is to ask students to read about a subject before lectures; the lectures can then

be used for confirmation and clarification of what students have already seen. However, the material loaded on ABSALON one week before the lectures were not read by the students even the most important points at this material were highlighted.

- Give as much multi-representational support as possible. Lecturers should support their oral descriptions with a number of other types of representation such as overhead slides, handouts, demonstrations, computer simulations, etc. Power point slides, hand-outs, case scenarios on videos were presented during the lectures. In addition, a live role-play scenario was performed with a professional from the field. This session along with videos was the most attractive part of the lectures for students. They emphasized this kind of “real-life” scenarios that could be adapted to clinics were the most useful and needed.

A Questionnaires

19/9/2011

Dear Participant,

The questionnaire aims to improve the quality of the learning by assessing your ideas and perceptions about the respective lecture. The questionnaire is part of the project for “Adjunkt pædagogikum Kursus” which serves for creating better learning environment for the students at the School of Dentistry, University of Copenhagen. Please fill the questionnaire that will be treated anonymously.

1. First initials of your name and surname, and birthday (e.g. AC220673):

--	--	--	--	--	--	--	--	--

2. Gender: female male

3. Age and grade:,

4. What is your first language?

5. In which language did you primarily complete your:

5a. primary education?

5b. high school?

6. **Please choose the answer that appears most appropriate.** If you are unsure about which response to give a question, the first response you think of is often the best one.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Learning about compliance is interesting					
Learning about compliance will improve my caries management skills					
In order to be a good dentist, I must know how to improve patient compliance					
Developing my communication skills is as important as developing my knowledge of dentistry to improve patient compliance					
I don't need to assess compliance to be a skilled dentist					
I can't see the point in learning compliance					
I haven't got time to learn neither communication skills nor compliance					
I think it's really useful learning “what” compliance is and “how” to improve it for the caries management					

7. Please choose the answer that appears most appropriate. If you are unsure about which response to give a question, the first response you think of is often the best one.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Lectures in English improve my ability to assess the international scientific literature.					
Lectures in English will facilitate my communication in international scientific media (e.g. congresses, meetings, seminars)					
In order to be a good dentist, I must have good dental English proficiency to follow up the current developments and innovations in dentistry.					
I can't see the point in learning lectures in English					
I think it's really useful learning scientific terminology in English for the dental degree					
Lectures in English will improve my professional skills; thus will help me to be respected by my national and international colleagues					
It is not easy for me to follow the instructions in English					
I have difficulties at analytical thinking and problem solving in English.					
I don't need professional English skills to be a dentist					
The use of English in learning dentistry is obvious but I can't be bothered to turn up to lectures in English					
Compared to the lectures in my first language, I participate less in discussions during lectures in English.					

8. How difficult or easy is it to study in English compared to studying in your first language?

- Easier
- The same as in my first language
- More difficult than in my first language
- Much more difficult than in my first language

I would like to hear any comments of yours.

.....

.....

.....

.....

THANK YOU FOR YOUR PARTICIPATION!

All contributions to this volume can be found at:

http://www.ind.ku.dk/publikationer/up_projekter/2011-4/

The bibliography can be found at:

http://www.ind.ku.dk/publikationer/up_projekter/kapitler/2011_vol4_nr1-2_bibliography.pdf/