

# The Evaluation of Dental English Education in China Based on 'Guanghua Cup' International Clinical Skill Exhibition Activity

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## Research article

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# Abstract

**Objectives:** To evaluate current Chinese dental English education based on the Chinese participants' application ability of dental English during an international dental skill competition called 'Guanghua Cup activity'.

**Methods:** The enrollment ratio of English and Chinese volunteers, the answer rate and accuracy of English knowledge quiz of Chinese and international contestants were statistically described. A 5-point Likert scale questionnaire was delivered to contestants, English and Chinese volunteers. The data was analyzed using spearman test, Kruskal-Wallis rank sum test and Mann-Whitney U test.

**Results:** Among the 194 students, the English and Chinese volunteer enrollment rate was 7.73% and 30.93%, respectively. The answer rate of Chinese participants and international participants in the English quiz was 25% and 75%, with an accuracy rate of 50% and 66.70%, respectively. The questionnaire was graded by Likert 5-level classification. There was a positive correlation between the use of English textbooks in classes and the communication with international teachers and students in the competition ( $R_s = 0.348$ ,  $p = 0.016$ ). English volunteers had more preparation in English before the competition, more opportunities to communicate with international peers, and greater improvement in English ability than the contestants and Chinese volunteers ( $p < 0.001$ ). After the competition, all participants paid more attention to dental English ( $p < 0.001$ ).

**Conclusions:** Chinese dental students have difficulty in dental English application. The 'Guanghua Cup' helps to improve English proficiency of English volunteers and arouses the interest of dental English for all participants. Chinese dental school needs to strengthen and reach a consensus in dental English education.

## Introduction

Dental English or bilingual dental courses has been implemented in some dental schools in China for about 3 decades.<sup>1</sup> According to a questionnaire survey on dental English teachers from 6 top dental schools in China, the dental English courses adopted a passive learning style which mainly focus on theoretical teaching with written exams.<sup>1</sup> In recent years, with the development of exchange programs, international academic forums and international dental operation skills competition, the demand for dental English application of dental students to communicate with international peers has increased. Additionally, academic globalization of international scientific communication and professions require Chinese students to master dental English comprehensively. Therefore, an overall evaluation of dental English education in China is needed to see if the current teaching system can satisfy the need of Chinese dental students in dental English.

From 2017 to 2019, Guanghua School of Stomatology, Sun Yat-sen university held a dental clinical skill competition called 'Guanghua cup' clinical skills exhibition activity for 3 years on end (hereinafter referred to as the 'Guanghua Cup activity'). In 2017 and 2018, more than 20 dental schools across the country

were invited. While in 2019, not only the dental schools from all around China, but also from the United States and Thailand were involved. Therefore, all aspects of the Guanghua Cup activity in 2019 require the dental English proficiency of participants. And it provides a platform for participants to put dental English into actual practice. The purpose of this study is to explore the effects of international competitions as 'Guanghua cup activity' on dental English ability of the participants as well as to evaluate and analyze the existing dental English education in China.

## **Materials And Methods**

### **Ethics approval and consent to participate**

Ethical approval was obtained from the Medical Ethics Committee of Hospital of Stomatology, Sun Yat-sen University (Institutional Review Board no.KQEC-2020-11). The committee waived the need for written informed consent because responding to this anonymized questionnaire contained no more than minimal risk and consent by action was used.

### **Basic information about Guanghua Cup activity**

The Guanghua Cup activity was held in mid-December of 2019. A total of 22 teams from the top dental schools in Beijing, Shanghai, Jilin, Sichuan, Shanxi, Xinjiang, Zhejiang, Nanjing, Heilongjiang, Liaoning, Hubei, Chongqing, Guangdong and Guangxi province of China, as well as 2 international teams from Thailand and the United States, participated in the event. Each team has four contestants. Before the event, the English and Chinese volunteers was recruited among 194 senior undergraduates and postgraduates from Guanghua School of Stomatology, Sun Yat-sen University, with no limits in number and candidate qualification. English volunteers include English hosts, English receptionists and translators. And Chinese volunteers include Chinese hosts, Chinese receptionists and invigilators.

The Guanghua Cup activity has two sessions: clinical operation skill assessment session and knowledge quiz session. The questions in knowledge quiz session was from the 24 teams. Each team provided 4 questions before the event. Since there are 2 international teams, a total of 8 questions were in English. And the rest of the questions provided by the Chinese teams were bilingual. As the teams providing the questions were forbidden to answer their own questions, 22 Chinese teams and 1 of the 2 international teams vied to answer the 8 questions by using the buzzers.

### **Questionnaire survey**

A questionnaire survey was conducted after the event. The questionnaires were delivered to all the participants via wechat. The questionnaire including 16 5-point Likert scale items, 1 single choice item and 1 multiple choices with open answers item was created by the author. The options ranges from strongly disagree (1 point) to strongly agree (5 points), or other five classification descriptions, calculated on a scale of 1–5. Three main themes were assessed using the questionnaire: 1) the current situation of dental English education in China; 2) the influence of dental English education on the activities; 3) the

influence of 'Guanghua cup activity' on the perceptive improvement of participants' English ability. The questionnaire was collected and the unqualified ones were eliminated.

## **Statistical analysis**

SPSS 19.0 statistical software was used to analyze the data. Descriptive statistics were applied to present the registration rate of Chinese and English volunteers, the answer rate and accuracy of English questions answered by Chinese and international participants and the questionnaire survey. The reliability of the questionnaire was calculated using the alpha coefficient of internal consistency (Cronbach Alpha).

The Likert questionnaire was calculated on a scale of 1–5. The dental English education score of each dental school was defined by the author. It's the average score of the use of English by teachers, textbooks, references and exams in the questionnaire done by 2–4 contestants from each dental school (Table 4). Spearman rank correlation test was used to determine the correlation of current dental English education and the perception of the participants' dental English ability, as well as the correlation of dental English education score of each dental school and the ranking of the dental school. Kruskal-Wallis rank sum test was used to compare between English, Chinese volunteers and contestants in the aspects of English ability and perceptual English ability improvement. Mann - Whitney U test was used to compare the English ability of undergraduate and post-graduate students, as well as the dental English perception before and after the Guanghua Cup activity. *P*-value of 0.05 was considered as statistically significant.

Table 4  
Dental English education score of each dental school (n = 80)

<b>University</b>	<b>Number of contestants</b>	<b>Dental English education score (From high to low)</b>	<b>CUSR</b>
Sichuan university	2	4.75	2
Tianjin medical university	4	4.56	12
Guangzhou Medical University	3	4.25	N/A
Guangxi Medical University	4	4.13	17
Chongqing Medical University	4	4.13	18
Tongji University	3	3.75	15
Harbin Medical University	4	3.44	14
Capital Medical University	4	3.13	8
Wuhan University	4	2.94	6
Jilin University	4	2.81	13
Dalian Medical University	4	2.75	16
Xinjiang Medical University	4	2.69	N/A
Shanghai Jiao Tong University	3	2.67	4
Zhejiang University	3	2.33	10
China Medical University	4	2.31	9
Shandong University	3	2.17	11
Nanjing Medical University	4	1.94	5
Peking University,	4	1.88	1
Southern Medical University	4	1.88	N/A
Xian Jiaotong University	4	1.81	19
Sun Yat-sen University	3	1.75	7
Air Force Medical University	4	1.63	3

## Results

### Volunteer enrollment

194 senior undergraduates and postgraduates (age:  $22.23 \pm 1.94$  years; Female:130, male:64) from Guanghua School of Stomatology, Sun Yat-sen University were volunteer candidates. The number of English volunteers was 15, accounting for 20% of the total number of volunteers and 7.73% of the total number of volunteer candidates. The number of Chinese volunteers was 60, accounting for 80% of the total number of volunteers and 30.93% of the total number of recruits.

### Sample characteristics of Questionnaire survey

A total of 121 questionnaires were released and 116 valid questionnaires were collected, with a response rate of 95.87%. Since the students were not required to answer all the questions, unanswered questions were considered as missing data. Cronbach's alpha coefficient was 0.78, suggesting good reliability of the questionnaire.

The characteristics of 116 participants (age of  $22 \pm 1.7$ ) from 22 top dental schools in China were summarized in Table 1.

Table 1  
Sample characteristics of participants (n = 116)

<b>Sample characteristics</b>	<b>number(%)</b>
Participants	
Contestants	80(68.97)
English volunteers	9 (7.76)
Chinese volunteers	27(23.27)
Gender	
Male	28(24.14)
Female	88(75.86)
University of the Dental school	
Sun Yat-sen University	36(31.03)
Capital Medical University	4(3.44)
Zhejiang University	3(2.56)
Shanghai Jiao Tong University	3(2.56)
Nanjing Medical University	4(3.44)
Guangxi Medical University	4(3.44)
Shandong University	3(2.56)
Harbin Medical University	4(3.44)
Air Force Medical University	4(3.44)
Wuhan University	4(3.44)
Tianjin medical university	4(3.44)
Peking University	4(3.44)
Jilin University	4(3.44)
Guangzhou Medical University	4(3.44)
Southern Medical University	5(4.31)
Dalian Medical University	4(3.44)
Chongqing Medical University	4(3.44)
Sichuan university	2(1.72)
Xian Jiaotong University	4(3.44)

Sample characteristics	number(%)
Tongji University	4(3.44)
Xinjiang Medical University	4(3.44)
China Medical University	4(3.44)
Grade	
Grade 4	1 (0.86)
Grade 5	99(85.34)
Post-graduate students	16(13.79)
Have you taken Dental courses	
Yes	115(99.14)
No	1 (0.86)

## The evaluation of participants' dental English ability based on knowledge quiz session

In order to evaluate the participants' English ability, the comprehension and reaction time of Chinese and English questions in knowledge session was examined. We selected 96–97 subjects who participated in the knowledge quiz session. The results showed that 82.29% of participants thought the Chinese questions could be fully understood, while only 7.72% thought the English questions could be fully understood. 63.92% of participants thought that the response speed of English questions was much slower than that of Chinese questions.

The English ability of undergraduate and post-graduate volunteers was compared based on the knowledge quiz session of Guanghua Cup. The questions in Table 2 was calculated on a scale of 1–5 and the score of undergraduate and post-graduate volunteers was compared using Mann - Whitney U test. The score of Chinese question understanding ( $U = 28, P = 0.48$ ), English question understanding ( $U = 35, P = 0.96$ ) and reaction time towards English and Chinese questions ( $U = 31.5, P = 0.67$ ) between the undergraduate and post-graduate students were of no statistical significance.

Table 2  
The evaluation of participants' dental English ability based on knowledge quiz session

Questions	Number(%)
In knowledge quiz session, you can totally understand the Chinese questions(answer if you have participated the session).	n = 96
Totally disagree	1 (1.04)
Disagree	2 (2.08)
Not sure	2 (2.08)
Agree	12(12.50)
Totally agree	79(82.29)
In knowledge quiz session, you can totally understand the English questions(answer if you have participated the session).	n = 97
Totally disagree	5 (5.15)
Disagree	37(38.14)
Not sure	22(22.68)
Agree	26(26.81)
Totally agree	7 (7.22)
In knowledge quiz session, the reaction towards English questions is as fast as the Chinese ones(answer if you have participated the session)	n = 97
Totally agree	0 (0)
agree	22(22.68)
Not sure	2 (2.06)
Disagree	62(63.92)
Totally disagree	11(11.34)

The comparison of the answer rate(answered questions in proportion of the total English questions) and accuracy(correct answer in proportion of the answered question) of 8 English questions between the Chinese and International teams in the knowledge quiz session was statistically described. 22 Chinese team and 1 International team vied to answer the 8 English questions using the buzzers. The Chinese team answered 2 questions(answer rate: 25%) with 1 correct answer(accuracy: 50%). The international team answered 6 questions(answer rate: 75%) with 4 correct answers(accuracy: 66.67%).

## **The use of English in dental English course in China**

We investigate the status quo of dental English education in participating schools from the aspects of the language used by the teachers, textbooks, references and exam. A total of 115 subjects from 22 dental schools in China and who have already had dental English courses were studied.

The results was described from the point of view of the most people: 63.48% of the participants think teacher speak a little English in the class. 35.5% of the participants uses Chinese textbooks. 60.00% participants uses references in mostly Chinese and a little English. 55.65% participants take the exam in mostly Chinese and a little English. The statistical results of existing oral English education are shown in Table 3.

Table 3  
The use of English in dental English course(n = 115)

Questions	Number(%)
The teachers in dental English class	
Speak Chinese only	11(9.57)
Speak a little English	73(63.48)
Half and half	3 (2.61)
Speak a little Chinese	23(20.00)
Speak English only	5 (4.35)
The textbooks are	
In Chinese	41(35.65)
Mostly Chinese and a little English	40(34.78)
Half and half	3 (2.61)
Mostly English and a little Chinese	10(8.7)
In English	21(18.26)
The references are	
In Chinese	2 (1.74)
Mostly Chinese and a little English	69(60.00)
Half and half	1 (0.87)
Mostly English and a little Chinese	28(24.35)
In English	15(13.04)
The exams are	
In Chinese	8 (6.96)
Mostly Chinese and a little English	64(55.65)
Half and half	5 (4.35)
Mostly English and a little Chinese	11(9.57)
In English	27(23.48)

The use of English from each dental school was given a score which was defined as dental English education score defined by the author based on Table 3. 80 contestants from 22 dental schools were involved. The score of each dental school of the University and the ranking of the Chinese dental school

based on the 4th China University Subject Rankings (CUSR) by the Center for Degree and Graduate Education Development of China Ministry of Education in 2017<sup>2</sup> was shown in Table 4. The correlation of the score and the ranking of the dental school in China was examined using spearman test. The results show that the relationship between the use of English in course and the ranking of the dental school is of no statistical difference. ( $R_s = 0.315$ ,  $P = 0.189$ )

## **The influence of dental English education on Guanghua Cup activity**

We investigate how the participants think about the current dental English education in helping them communicate and understand in the Guanghua Cup activity. And evaluate the participants' ability in understanding English. A total of 115 subjects who have already had dental English courses were studied.

As to how the dental English class helps the participants in the Guanghua Cup activity, 45.83% of the students thought that dental English education in class was of much help in communicating with international students and teachers. And 47.83% of the students thought that it was of much help in understanding the Guanghua Cup activity. Vocabulary was found the most helpful (98, 85.22%). In order to know the detailed aspect of how the dental English class helps the participants, the correlation Table 3 (Teachers, textbooks, references and exam) and Table 5 (communication and understanding) was examined using spearman test. The results show that the score of English textbook was positively correlated with the international communication between teachers and students score ( $R_s = 0.348$ ,  $P = 0.016$ ).

Table 5  
The influence of current dental English education on the Guanghua Cup activity

Questions	Number(%)
Does the dental English class help you in the communication with international students or teachers(answer if you have the communication experience)?	n = 48
No help	0 (0)
A little help	4 (8.33)
moderate help	13(27.08)
Much help	22(45.83)
Most help	9 (18.75)
Does the dental English class help you in understanding English during the Guanghua Cup activity?	n = 115
No help	5(4.35)
A little help	14(12.17)
moderate help	27(23.48)
Much help	55(47.83)
Most help	14(12.17)
What do you find the most helpful in dental English class in understanding the Guanghua Cup activity?	n = 115
Vocabulary	98(85.22)
Listening	27(23.48)
Reading	39(33.91)
Speaking	15(13.04)
Writing	5 (4.35)
Others	0 (0)

The statistical results of the current dental English education on the Guanghua Cup activity are shown in Table 5.

## **The influence of Guanghua Cup activity on the participants' English ability**

The influence of Guanghua Cup activities on participants' English ability was examined among all the participants (N = 116). The results will be described from the point of view of the most people: 43.97% participants had a little English preparation before the Guanghua Cup activity, and 58.62% of the

participants said that they had no chance to communicate with international students or teachers. About 30 percent of the participants said they saw a little or no improvement in vocabulary, speaking, listening and reading.

As to how the participants think in what way can they improve their dental English ability, 82.76% of the participants think English textbooks and essays help to improve their dental English ability the most, followed by courses focusing on dental English (N = 81, 69.83%) and 'to participate in international competition/exchange program/international conference' (N = 80, 68.97%). In addition, participants also suggest to hold 'oral dental English competition' and 'increase the variety of the forms of dental English exams'. The statistical results of the influence of activities on participants' English ability and perception are shown in Table 6.

Table 6  
The influence of the Guanhua Cup activity on participants' English ability(n = 116)

Questions	Number(%)
I studied a lot of English for the Guanhua Cup activity before the event	
Totally disagree	19(16.38)
Disagree	51(43.97)
Not sure	2 (1.72)
Agree	37(31.9)
Totally agree	7 (6.03)
I had a lot of communication with the international students and teachers	
Totally disagree	68(58.62)
Disagree	32(27.59)
Not sure	1 (0.86)
Agree	11(9.48)
Totally agree	4 (3.45)
I had a great improvement in vocabulary in the Guanhua Cup activity	
Totally disagree	27(23.28)
Disagree	37(31.90)
Not sure	17(14.66)
Agree	27(23.28)
Totally agree	8 (6.90)
I had a great improvement in oral English in the Guanhua Cup activity	
Totally disagree	33(28.45)
Disagree	38(32.76)
Not sure	13(11.21)
Agree	27(23.28)
Totally agree	5 (4.31)
I had a great improvement in listening in the Guanhua Cup activity	
Totally disagree	24(20.69)
Disagree	33(28.45)

Questions	Number(%)
Not sure	14(12.07)
Agree	39(33.62)
Totally agree	6 (5.17)
I had a great improvement in reading in the Guanghua Cup activity	
Totally disagree	23(19.83)
Disagree	38(32.76)
Not sure	19(16.38)
Agree	33(28.45)
Totally agree	3 (2.59)
I had a great improvement in my dental English ability in the Guanghua Cup activity	
Totally disagree	23(19.83)
Disagree	39(33.62)
Not sure	13(11.21)
Agree	33(28.45)
Totally agree	8 (6.90)
I paid much attention to dental English learning before the Guanghua Cup activity	
Totally disagree	5 (4.31)
Disagree	32(27.59)
Not sure	54(46.55)
Agree	14(12.07)
Totally agree	11(9.48)
I paid much attention to dental English learning after the Guanghua Cup activity	
Totally disagree	1 (0.86)
Disagree	0 (0)
Not sure	6 (5.17)
Agree	32(27.59)
Totally agree	77(66.38)

Questions	Number(%)
In what ways do you think you can improve your dental English ability(multiple choices)	n = 116
Traditional dental English class	27(23.28)
Courses focusing on dental English	81(69.83)
Reading English textbooks and essays	96(82.76)
Attending international competition/exchange program/international conference	80(68.97)
Others (please list out)	6 (5.17)

To see if contestants, English and Chinese volunteers have the same perception and improvement in dental English, Kruskal-Wallis rank sum test was used to determine among different types of participants. The subjects were divided into English volunteers (N = 9), Chinese volunteers (N = 27) and contestants (N = 80). The scores of the three groups were different in the English preparation before Guanghua Cup activity ( $H = 23.87, P < 0.001$ ). The score of English volunteers was more than that of the contestants and the Chinese volunteers, and the difference was statistically significant ( $P < 0.001$ ). There was no difference between Chinese volunteers and contestants ( $P = 0.064$ ).

The scores of the three groups were different in the communication with international students and teachers ( $H = 24.63, P < 0.001$ ). The score of English volunteers was more than that of the contestants and the Chinese volunteers, and the difference was statistically significant ( $P < 0.001$ ). There was no difference between Chinese volunteers and contestants ( $P = 0.058$ ).

The scores of the three groups were different in the improvement of comprehensive English ability ( $H = 17.86, P < 0.001$ ), including vocabulary ( $H = 16.41, P < 0.001$ ), speaking ( $H = 20.48, P < 0.001$ ), listening ( $H = 13.95, P = 0.001$ ) and reading ( $H = 9.2, P = 0.01$ ). Among them, the above scores of English volunteers were higher than those of Chinese volunteers and contestants, and the difference was statistically significant ( $P < 0.001$ ). There was no difference between Chinese volunteers and competitors ( $P = 0.09$ ).

English volunteers, Chinese volunteers and competitors all attach more importance to oral English after the Guanghua Cup activity than before ( $U = 1969.5, P < 0.01$ ).

## Discussion

### Limitations of dental English education in China based on Guanghua Cup activity

The Guanghua Cup activity is an international dental clinical skill competition with participants from China, Thailand and the United States. With the requirements to apply English and the chance to communicate with international peers during the event, the Guanghua Cup is a good platform to evaluate

the current dental English education in China. Our study shows that the Chinese students have difficulty in English application. The low registration rate of English volunteers can reflect students' lack of confidence in their English application ability and comprehensive English application ability to some extent. In knowledge quiz session, the answering rate of 22 Chinese teams(25%) is much lower than that of 1 international team(75%). And the participants feels that the response time of English questions is much slower than that of Chinese questions. 11.34% of participants even could not understand English questions at all (Table 2). As to the English ability of undergraduate and post-graduate volunteers based on the knowledge quiz session of Guanghua Cup, there's no statistical difference between the 2 groups. Since the volunteers were all from Guanghua School of Stomatology, the result is of limited representativeness.

The reason of unsatisfied dental English ability of Chinese participants might result from the limited English exposure in dental English education. Our study shows that there are large differences in dental English teaching nationwide. And only a few dental schools emphasize the use of English in class (Table 3). Surprisingly, the use of English in class is not statistically correlated with the reputation of the dental school(Table 4). In Guanghua School of Stomatology, Sun Yat-sen University, we have 2 schooling systems. The 5 + 3 schooling system (the original seven-year program) adopted Chinese textbooks, English references and English exams. Only a few teachers speaks English during the course. While for the students in 5-year schooling system, the dental courses are mostly Chinese. The contestants from Guanghua School of stomatology were all from the 5-year schooling system, which might account for the low dental English education score in Table 4. Therefore, the Chinese dental students cannot receive a standardized dental English course with clear objectives and plans, since the dental English education not only differs between schools, but also within schools in China. In other ESL(English as a second language) countries such as Japan, dental English courses with no consensus on the content and teaching methods existed for a long time.<sup>3</sup> This might be a common phenomenon in non-English speaking country.

Another reason contributing to the current dental English ability of the Chinese participants could be the limited English exposure and teaching methods in class. Our study showed that most dental schools adopted a teaching strategy that involves mostly Chinese(Table 3). Apparently, the current teaching mode cannot satisfy need for Chinese students. With the advancement of globalization, many dental students in ESL countries are facing the same language problems.<sup>4</sup> Reformed English teaching mode and more importance should be attached to actual application of dental English in these countries.

## **International competition such as 'Guanghua cup activity' can provide a good platform to apply dental English.**

Our study shows that English volunteers feels great improvement in English unlike most of the participants. The main language of this Guanghua Cup activity is Chinese. So for most participants, English exposure during the Guanghua Cup activity is limited. For English volunteers, our school arranged

scenario-oriented language training before the competition. Moreover, this Guanghua Cup activity provides practical application scenarios and communication opportunities for English volunteers, which acts as an extension of in-class dental English teaching. Therefore, the results of the questionnaire showed that the English volunteers who were deeply involved in the Guanghua Cup activity felt greatly improved in all aspects of dental English.

Although most participants have little exposure to English environment and limited English application scenarios, this Guanghua Cup activity aroused all participants' attention to dental English (Table 6). Therefore, International activities make students realize the importance of English which may provide motivation to learn dental English.

## **Future expectation of dental English education in China**

Dental English ability was needed in multiple aspects such as science essay reading, overseas education, academic communications with international peers, and the need to communicate with foreign patients etc. Proficient dental English ability can expand the students' horizons and explore more possibilities in the career.<sup>5</sup> Study showed that in non-English speaking country such as Japan, the competency and confidence in the English language could be one of the biggest obstacles for dental students to study abroad.<sup>6</sup> Poor English ability may limit the possibility of career path for the dental students. Therefore, a better dental English education mode should be discussed to meet the demand of English application in Chinese dental students.

Our study showed that most students feels that the current dental English education is helpful in the Guanghua Cup activity (Table 6), indicating that the current dental English education has achieved certain accomplishment. But at the same time we also notice the problems, such as passive teaching mode with little English exposure, limited application scenario and inconsistent teaching goals nationwide. Based on the current problems, several suggestions were made. Firstly, the dental schools in China should reach a consensus in dental English education to standardize the teaching objectives. Secondly, the teaching mode should be broadened and multiple teaching methods should be applied. A more active learning mode such as peer teaching and learning activities<sup>7</sup> should be considered. Our study also showed a positive correlation of English textbook and peer communication, indicating the importance of English textbook in improving dental English. Thirdly, as our study suggested, the schools should consider courses focusing on dental English, organize English textbooks and essay reading seminars, hold dental English related competition, and encourage students to attend international competition. exchange program and international conference. Since our study showed that the English volunteers reflects a perceptive English improvement due to more English study before the event and chances of English application during the event, and all participants attach more importance to dental English after the event, more international competition like Guanghua Cup activities should be held to evaluate the dental English education and provide a dental English application platform.

## **Conclusion**

The current dental English education is insufficient to meet the demand of Chinese students in dental English application. International competition such as 'Guanghua cup activity' can arouse participants' enthusiasm in dental English learning, and provide platform for English application. In the future, the reform of dental English teaching should consider multi-scenarios to provide students with adequate language learning and application environment.

## Declarations

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## Competing interests

The authors declare that they have no competing interests.

## Consent for publication

Not applicable.

## Ethics approval and consent to participate

The study was specifically reviewed and approved by the ethic Committee of the Guanghua School of Stomatology, Sun Yat-sen University. The research did not involve any handling of sensitive personal data or clinical procedures and, therefore no other special consent was required.

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