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Course content analysis of the last dental course for the medical students of National Taiwan University in 2011

KEYWORDS

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system

The requirement for the medical students of National Taiwan University (NTU) to take dental courses is a fine tradition that has been maintained from the Taiwan Government Medical School to the Faculty of Medicine of Taipei Imperial University (TIU) during the Japanese colonial period (1895–1945) and further to the College of Medicine of NTU of the post-war period.¹ However, due to a system change, this tradition was eventually eliminated. In the College of Medicine of NTU, the one-credit dental course entitled “Introduction to dentistry” was last implemented in 2011. It is a dental course offered to the medical students by the teaching staff of the School of Dentistry of NTU. In fact, the benefits of studying dentistry by the medical students are not only for the medical education, but also for the medical students to gain a more comprehensive understanding of the dentistry and the oral and maxillofacial diseases, and this knowledge is very helpful for the future medical practice.² Even so, our medical education system pays relatively little attention to the issue of dental knowledge for the medical students. In this article, we searched and analyzed the content of the last dental course for the medical students of NTU in 2011.

In this course content analysis, the NTU Online Course Network (<https://nol.ntu.edu.tw/nol/guest/index.php>) was used to filter the last dental course entitled “Introduction to dentistry” for the medical students and to search the information related to this course. The

learning topics, course content characteristics, and teacher expertise of this last dental course for the medical students of NTU in 2011 are shown in Table 1.

This dental course introduced the issues of oral biology and the content of dentistry, including oral cancer, trauma to the teeth and jaws, oral and facial infections, oral metabolic diseases, dental materials, oral mucosal lesions, full mouth reconstruction, masticatory system, orthodontic treatment of malocclusion, periodontal diseases, endodontic diseases, pediatric dentistry, prosthodontics, etc. The goal of this course was to help the medical students for better understanding of the scope of dentistry and oral biology. This course was a specific subject for the medical students in the first semester of the sixth academic year of the seven-year medical department of NTU, which was a one-credit course and was taught in the form of classroom lectures and discussions. Moreover, there were 109 medical students taking this dental course.

There were 16 learning topics in total in this dental course (Table 1). It was a 1-h lecture for a topic and was taught by 16 senior attending dentists from the dental department of National Taiwan University Hospital (NTUH). Of the 16 learning topics, the most common course content characteristics was oral diseases and treatment ($n = 9$), followed by the introduction to various specialties of dentistry ($n = 8$), comprehensive issues related to dentistry ($n = 2$), and oral structure and function ($n = 1$). It should

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Table 1 Learning topics, course content characteristics, and teacher expertise of the dental course entitled “Introduction to dentistry” for the medical students of National Taiwan University (NTU) in 2011.

No.	Learning topics	Course content characteristics ^a	Teacher expertise ^b
1	Traumatic injuries of the teeth and jaws	Type B	OS
2	Orofacial infection	Type B	OS
3	Introduction to dental materials	Type D	Endo
4	Introduction to endodontics	Type C	Endo
5	Areca quid chewing and oral diseases	Type B	Perio
6	Introduction to surgical endodontics	Type B and C	Endo
7	Esthetic dentistry	Type C	OD
8	Introduction to prosthodontics	Type C	Prosthodontics
9	Introduction to periodontics	Type C	Perio
10	Functional disturbance of the masticatory system	Type A and B	Prosthodontics
11	Introduction to orthodontics	Type C	Ortho
12	Dental problem in children	Type B and C	Pedo
13	Surgical management of malocclusion	Type B	Ortho
14	Dental management for the special needs patients	Type B and C	FD and SND
15	The art and science of dentistry	Type D	Endo
16	Oral precancers and cancers and their differential diagnosis	Type B	OP

^a The type of course content characteristics was shown as follows: Type A: Oral structure and function; Type B: Oral diseases and treatment; Type C: The introduction to various specialties of dentistry; Type D: Comprehensive issues related to dentistry.

^b The abbreviations of various specialties of dentistry were shown as follows: oral and maxillofacial surgery (OS), oral pathology (OP), orthodontics (Ortho), pediatric dentistry (Pedo), endodontics (Endo), prosthodontics (Prosthodontics), operative dentistry (OD), periodontics (Perio), family dentistry (FD), and special needs dentistry (SND).

be noted that some learning units had 2 kinds of course content characteristics. Of the teaching staff, all of them had dental expertise or specialist qualifications and covered all specialties in the current dental specialist system of Taiwan, including oral and maxillofacial surgery (OS), oral pathology (OP), orthodontics (Ortho), pediatric dentistry (Pedo), endodontics (Endo), prosthodontics (Prosthodontics), operative dentistry (OD), periodontics (Perio), family dentistry (FD), and special needs dentistry (SND). The most common dental expertise of the teaching staff was Endo ($n = 4$), followed by OS ($n = 2$), Ortho ($n = 2$), Prosthodontics ($n = 2$), and Perio ($n = 2$). Among them, there were 15 faculty members from the School of Dentistry of NTU, including 8 professors, 2 associate professors, 2 clinical associate professors, 2 assistant professors, and one lecturer (Table 1).

During the Japanese colonial period, the medical students needed to take the dental courses and participated in the dental internship. This was of significance for cultivating them to acquire dental knowledge and dental clinical abilities and skills. The dental curriculum at that time for the medical students had the function of allowing them to be qualified to perform dental services after becoming physicians.^{3,4} Although such a medical education system no longer existed after the World War II, the dental education for the medical students is still of great significance today. In addition to imparting the dental knowledge (such as oral structure and function, oral diseases and treatment, and the introduction to various specialties of dentistry), the dental education for the medical students currently also has an important way in bridging the gap between medicine and dentistry. According to our 2022 survey, there were 13 medical schools

in Taiwan. Among them, only 6 (46.15%) offered dental curriculum for their medical students in the 2022 academic year. Their curriculum content had some topics on communication between medicine and dentistry (such as the relationship between oral diseases and systemic diseases, oral clinical manifestations in patients with systemic diseases, and the tooth-numbering system).⁵ Especially, the tooth-numbering system is a common language of communication between physicians and dentists. It is worth teaching for our medical students. In Taiwan, there are currently 8 dental schools with comprehensive dental teaching faculty. Therefore, a well-planned dental curriculum for the medical students is an achievable goal.

Declaration of competing interest

The authors have no conflicts of interest relevant to this article.

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References

- Cheng FC, Chiang CP. A pioneer in the paradigm shift of dental education in Taiwan: in memory of Dr. Shwei Kuo (1913–1997). *J Dent Sci* (in press).
- Lin HP, Wang LH, Lin TC, Cheng FC, Chiang CP. Oral medicine education for medical students - a retrospective evaluation of the course in MacKay Medical College from 2016 to 2021. *J Dent Sci* 2022;17:1292–9.

3. Cheng FC, Wang LH, Ozawa N, Chang JYF, Liu SY, Chiang CP. Development of dental education for medical students in Taiwan during the Japanese colonial period. *J Dent Sci* 2022;17: 903–12.
4. Cheng FC, Wang LH, Ozawa N, Chang JYF, Liu SY, Chiang CP. Dental education and special dental practitioner-cultivating system in Taiwan during the Japanese colonial period. *J Dent Sci* 2022;17:920–7.
5. Cheng FC, Wang YL, Chiang CP. Dental curriculum for medical students in Taiwan: a preliminary survey. *J Dent Sci* 2024;19: 747–50.

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