

## Education Content of Department of Dental Hygiene and Actual Condition of the Overlapping Analytic Syllabus

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### 치위생과 교육내용 및 교수요목 중복실태 분석

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**ABSTRACT** This research was conducted to provide standardization method for new dental hygiene curriculum by identifying the overlapping of education content of the Department of Dental Hygiene and analytic syllabus. To complement these overlapping education programs, I would like to make some proposals. First, unified course shall be provided by compromising specific terms of overlapping subject, overlapping curriculums for the necessary skills required for job analysis of dental hygienist and overlapping class time. This shall increase the efficiency the class time and required curriculums. Next, proactive and continuous research for standardized approach to the Department of Dental Hygiene education content is necessary and Dental Hygiene academic circle shall build trust.

**key words** Dental Hygiene curriculum, Specific term, Education content, Actual condition

### Introduction

#### 1. Necessity of the research

The practice of dental hygiene was developed to provide oral health education and preventive oral health care. Recently the role of dental hygienist has recently seen an exponential change due to the medical environment. Accordingly, it is very important to break from standardized and rigid education program and to seek for new education program that can meet up the expectation of the new era. There have been numerous researches regarding the effectiveness of dental hygienist education in developed countries and they were not afraid to implement new programs.<sup>1)</sup> Consequently, there has been an increase in the necessity regarding the reformation of inefficient dental hygiene education resulting from the overlapping of dental hygiene education programs.

To provide standardization method for dental hygiene education, I would like to prepare fundamental materials by research and analysis of the current condition of Korea's dental hygiene education content and analytic syllabus.

#### 2. Purpose of the research

The purpose of this research is to provide fundamental information so as to provide standardization direction for the systematization and activation of practical education by researching and analyzing the overlapping specific terms within

the Department of Dental Hygiene curriculum.

1) Research the burden for studying specific terms of each curriculum provided in the Department of Dental Hygiene.

2) Research and compare the current condition of the overlapping of specific terms based on the subject for national exam and the main vocabulary book for developing questionnaires for the National Dental Hygienist Licensure Exam (Year 2003/ 6).

3) Apply overlapping terms identified in 2 to the university's Department of Dental Hygiene study time schedule prepared by Korea Association of Dental Hygiene Professors (2001.)

### Material & Methods

#### 1. Materials

1) List of National Dental Hygienist Licensure Examper subject.

2) Main vocabulary book for developing questionnaires for the National Dental Hygienist Licensure Exam.

3) Standard class time of university's Department of Dental Hygiene per each curriculum terms.

#### 2. Research Method

1) Organized curriculum terms by each chapter and verse of textbooks based on national exam.

2) Found overlapping terms from the selected curriculum terms.

3) Organized main vocabulary book for developing questionnaires for the National Dental Hygienist Licensure Exam curriculum.

4) Extracted overlapping terms from selected specific terms.

5) Prepared comparison table to check the overlapping of

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curriculum terms from 2 and 4.

6) Applied and organized overlapping terms identified in 5 to the Standard class time of university's Department of dental hygiene per each curriculum terms (Department of Dental Hygiene study object series).

7) Compared and analyzed the table from 5 and 6.

### 3. Limitations

1) Identical terms may have different meanings based on the curriculum.

2) Consideration for the unification of curriculum term is necessary. (ex: dental plaque, dental plaque, NaF)

3) Since class time was not allocated per specific terms, it was hard to find exact class time approach.

### 4. Framework of the Research

1) Understanding of the overlapping terms

(1) Organize curriculum terms by each chapter and verse of textbooks based on national exam.

(2) Find overlapping terms from the selected curriculum terms

(3) Organize main vocabulary book for developing questionnaires for the National Dental Hygienist Licensure Exam (Year 2003/ 6) per subject.

(4) Extract overlapping terms from selected specific terms.

2) Understanding the study time for specific terms of overlapping subject

Apply and organize overlapping terms identified in 5 to the Standard class time of university's Department of dental hygiene per each curriculum terms (Department of Dental Hygiene study object series)

3) Provision of unified standard subject for the activation of practical education program

## Result

This research was conducted to provide new standardized method for dental hygiene curriculum by identifying Korea's education contents and analytic syllabus. Research and analysis of overlapping terms from the Department of Dental Hygiene was conducted and the conclusion of research for systematization and activation of practical education is as below.

### 1. Current condition of the overlapping of specific terms

1) Occlusion

Oral Physiology, Orthodontics overlapped at textbook and main vocabulary book for developing questionnaires for the National Dental Hygienist Licensure Exam. Oral Pathology, Prosthodontia overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 2 hours for Oral Physiology, 4 hours for Orthodontics and 1 hour for Prosthodontia were found to be allocated respectively.

2) Cleft lip and Palate

Oral surgery and Oral Histology overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Oral Prophylaxis, Oral Anatomy, Oral Physiology, Oral Pathology and Orthodontics were overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for

development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 2 hours for Oral Surgery, 1 hour for Oral Histology and 1 hour for Oral Pathology were found to be allocated respectively.

3) Muscle

Oral Physiology and Oral Histology overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Oral Anatomy overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 4 hours for Oral Physiology, 4 hours for Oral Histology and 3 hours for Oral Anatomy were found to be allocated respectively.

4) Mottled tooth

Preventive Dentistry and Dental Public Health overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 6 hours for Preventive Dentistry and 4 hours for Dental Public Health were found to be allocated respectively.

5) Cure of Extracted wound

Oral Pathology and Oral Surgery overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 1 hour for Oral Pathology and 1 hour for Oral Surgery were found to be allocated respectively.

6) Cementum

Oral Histology, Periodontics and Oral Pathology overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Tooth Morphology, Oral Physiology and Oral Prophylaxis overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 10 hours for Oral Histology, 6 hours for Periodontics, 3 hours for Oral Pathology 1.5 hours for Tooth Morphology and 1 hour for Oral Physiology were found to be allocated respectively.

7) Composite Resin

Dental Materials overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Operative Dentistry was found only in National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 2 hours for Operative Dentistry and 2 hours for Dental Materials were found to be allocated respectively.

8) Malocclusion

Preventive Dentistry and Orthodontics overlapped at text-

book and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Dental Public Health, Oral Pathology and Oral Surgery overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 6 hours for Preventive Dentistry, 3 hours for Dental Public Health and 4 hours for Orthodontics were found to be allocated respectively.

#### 9) Fluoride paint

Preventive Dentistry overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Dental Public Health, Oral Pathology and Dental Materials overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 3 hours for Preventive Dentistry and 4.5 hours for Dental Public Health were found to be allocated respectively.

#### 10) Application business of fluoride

Dental Public Health overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Preventive Dentistry overlapped in textbook only.

As a result of comparison with university's Department of Dental Hygiene standard class time, 13 hours for Dental Public Health and 3 hours for Preventive Dentistry were found to be allocated respectively.

#### 11) Cell and tissue

Oral Pathology, Oral Physiology and Oral Histology overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 0.5 hours for Oral Pathology and 1 hour for Oral Physiology and 2 hours for Oral Histology were found to be allocated respectively.

#### 12) Nerve

Oral Physiology, Oral Surgery and Oral Histology overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Oral Anatomy, Periodontics overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 4 hours for Oral Physiology, 0.5 hours for Oral Histology and 4 hours for Oral Anatomy were found to be allocated respectively.

#### 13) Amalgam

Operative Dentistry and Dental Materials overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Pedodontics overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 2 hours for Operative

Dentistry, 2 hours for Dental Materials and 4 hours for Pedodontics were found to be allocated respectively.

#### 14) Temporomandibular joint

Oral Anatomy overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Oral Physiology, Oral Prophylaxis and Dental Prosthodontics overlapped only in textbooks and Oral Surgery was found only in National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 2 hours for Oral Anatomy, 0.5 hours for Oral Surgery, 4 hours for Physiology and 4 hours for Dental Prosthodontics were found to be allocated respectively.

#### 15) Deciduous dentition

Orthodontics, Pedodontics overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 3 hours for Orthodontics and 6 hours for Pedodontics were found to be allocated respectively.

#### 16) Dental accretion

Oral Prophylaxis, Oral Pathology overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Periodontics, Preventive Dentistry overlapped only in textbook and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 2 hours for Oral Prophylaxis, 3.5 hours for Oral Pathology, 6 hours for Pedodontics and 6 hours for Preventive Dentistry were found to be allocated respectively.

#### 17) Odontogenic infection

Oral Surgery overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Pedodontics overlapped only in textbook and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 4 hours of Oral Surgery were found to be allocated respectively.

#### 18) Pulp

Oral Physiology overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Oral Histology and Tooth Morphology overlapped only in textbook and Oral Pathology was mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 2 hours for Oral Physiology, 10 hours for Oral Histology and 1.5 hours for Tooth Morphology were found to be allocated respectively.

#### 19) Pulpitis

Oral Pathology overlapped at textbook and National Health

Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Oral Physiology overlapped only in textbook and Operative Dentistry was mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 2 hours for Oral Pathology and 2 hours for Operative Dentistry were found to be allocated respectively.

#### 20) Composition of tooth

Tooth Morphology overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Oral Prophylaxis and Oral Histology overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 2 hours for Tooth Morphology and 0.5 hours for Oral Histology were found to be allocated respectively.

#### 21) Eruption of tooth

Oral Histology, Pedodontics overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Tooth Morphology and Oral Pathology overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 10 hours for Oral Pathology were found to be allocated respectively.

#### 22) Gingiva

Oral Histology and Periodontics overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Preventive Dentistry, Oral Prophylaxis, Oral Physiology and Tooth Morphology overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 10 hours for Oral Histology, 6 hours for Periodontics, 6 hours for Preventive Dentistry, 6 hours Oral Prophylaxis, 6 hours for Oral Physiology and 1.5 hours for Tooth Morphology were found to be allocated respectively.

#### 23) Alveolar bone

Oral Histology and Periodontics overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Oral Physiology, Oral Pathology and Oral Prophylaxis overlapped only in textbooks and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 10 hours for Oral Histology, 6 hours for Periodontics, 1 hour for Physiology and 6 hours for Oral Prophylaxis were found to be allocated respectively.

#### 24) Periodontal ligament

Oral Histology, Periodontics and Tooth Morphology over-

lapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Oral Physiology, Oral Pathology and Oral Prophylaxis overlapped only in textbook and was not mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 10 hours for Oral Histology, 6, hours for Periodontics, 1 hour for Oral Physiology, 6 hours for Oral Prophylaxis and 1.5 hours for Tooth Morphology were found to be allocated respectively.

#### 25) Salivary gland

Oral Histology overlapped at textbook and National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam. Oral Physiology, Oral Pathology and Oral Anatomy overlapped only in textbook and Oral Surgery was mentioned at National Health Personnel Licensing Examination Board's specific term book for development of questionnaires for national exam.

As a result of comparison with university's Department of Dental Hygiene standard class time, 2 hours for Oral Histology, 2 hours for Oral Physiology and 2 hours for Oral Anatomy were found to be allocated respectively.

### 2. Frequent overlapping specific terms based on textbooks

#### 1) Tooth brushing

Dental Public Health, Oral Hygiene Education, Preventive Dentistry, Prosthodontics and Periodontics overlapped in textbook and as a result of comparison with university's Department of Dental Hygiene standard class time, 13 hours for Dental Public Health, 2 hours for Oral Hygiene Education, 3 hours for Preventive Dentistry and 2 hours for Periodontics were found to be allocated respectively.

#### 2) Oral prophylaxis

Preventive Dentistry, Oral Prophylaxis and Periodontics overlapped in textbook and as a result of comparison with university's Department of Dental Hygiene standard class time, 1 hour for Preventive Dentistry, 28 hours for Oral Prophylaxis and 3 hours for Periodontics were found to be allocated respectively.

#### 3) Dental caries

Preventive Dentistry, Pedodontics, Oral Pathology, Operative Dentistry, Oral Prophylaxis and Dental Public Health overlapped in textbook and as a result of comparison with university's Department of Dental Hygiene standard class time, 6 hours for Preventive Dentistry, 2 hours for Pedodontics, Dental Public Health were found to be allocated respectively.

#### 4) Gingivitis

Pedodontics, Oral Pathology, Periodontics and Oral Prophylaxis overlapped in textbook and as a result of comparison with university's Department of Dental Hygiene standard class time, 3 hours for Oral Pathology, 5 hours for Periodontics and 6 hours for Oral Prophylaxis were found to be allocated respectively.

#### 5) Periodontitis

Preventive Dentistry, Oral Prophylaxis, Dental Public Health, Oral Pathology and Periodontics overlapped in textbook and as a result of comparison with university's Department of Dental Hygiene standard class time, 6 hours for Preventive Dentistry, 6 hours for Oral Prophylaxis, 3 hours for Dental Public Health, 3 hours for Oral Pathology and 11 hours for

Periodontics were found to be allocated respectively.

#### 6) Saliva

Oral Physiology, Preventive Dentistry and Oral Pathology overlapped in textbook and as a result of comparison with university's Department of Dental Hygiene standard class time, 2 hours for Oral Physiology, 3 hours for Preventive Dentistry and 3.5 hours for Oral Pathology were found to be allocated respectively.

### Summary

The summary for the research is as provided. First of all, specific terms per textbook list compared to Main vocabulary book for developing questionnaires for the National Dental Hygienist Licensure Exam proved that there were several overlapping terms.

Second, there were some terms not mentioned in the Main vocabulary book for developing questionnaires for the National Dental Hygienist Licensure Exam(2003) but were mentioned in the specific terms per textbook list.

Third, there were some terms not mentioned in the specific terms per textbook list, but were mentioned in the Main vocabulary book for developing questionnaires for the National Dental Hygienist Licensure Exam.

Fourth, after applying the university's Department of Dental Hygiene standard class time for specific terms, class time were overlapped with several specific terms.

In addition, according to the job analysis<sup>2)</sup> of dental hygienist, overlapping of the curriculum of comparable clinic related specific terms are as below.

According to dental hygienist job analysis, necessary curriculums for composite resin are Operative Dentistry, Dental Materials, Preventive Dentistry and Pedodontics. As for the result of overlapping of specific terms were found to be educated at Operative Dentistry, Dental Materials, Preventive Dentistry.

According to dental hygienist job analysis, necessary curriculums for fluoride paint are Pedodontics, Preventive Dentistry, Dental Public Health, Oral Pathology, Dental Materials, Local Oral Health, Oral Health Care Education, Introduction of Dental Hygiene. As for the result of overlapping of specific terms were found to be educated at Preventive Dentistry, Dental Public Health, Oral Pathology and Dental Materials.

According to dental hygienist job analysis, necessary curriculums for Amalgam are Operative Dentistry, Dental Materials and Pedodontics. As for the result of overlapping of specific terms were found to be educated at Operative Dentistry, Dental Materials and Pedodontics.

According to dental hygienist job analysis, necessary curriculums for tooth brushing are Local Oral Health, Orthodontics, Oral Diagnosis, Dental Public Health, Oral Health Care Education, Preventive Dentistry, Prosthodontics, Periodontics, Biochemistry and Pedodontics. As for the result of overlapping of specific terms were found to be educated at Dental Public Health, Oral Health Care Education, Preventive Dentistry, Prosthodontics and Periodontics.

According to dental hygienist job analysis, necessary curriculums for Oral Prophylaxis are Oral Histology, Tooth Morphology, Oral Anatomy, Oral Health Care Education, Maintenance of Dental Medical Treatment, Preventive Dentistry, Oral Prophylaxis and Periodontics. As for the result of overlapping of specific terms were found to be educated at Preventive Dentistry, Oral Prophylaxis and Periodontics.

### 요 약

우리나라의 치위생과에 개설된 교과과정의 중복된 세부용어를

조사, 분석하고 현 실정에 맞는 실질적인 교육의 체계화와 활성화를 위한 교과과정의 표준화 방향제시에 기초 자료를 제공하는 데에 본 연구의 목적이 있다.

치위생과 교육내용 및 교수요목 중복 실태를 연구한 결과를 요약하면

1. 교과서 목차별 세부용어와 치과위생사 국가시험 문항개발 기준작성을 위한 핵심용어기준안(2003)의 세부용어가 중복되어진 교과목이 있었다.
2. 치과위생사 국가시험 문항개발 기준작성을 위한 핵심용어 기준안의 세부용어에서는 제시되지 않고 교과서 목차별 세부용어상에만 제시된 교과목이 있었다.
3. 교과서 목차별 세부용어상에는 제시되지 않고 치과위생사 국가시험 문항개발 기준작성을 위한 핵심용어 기준안의 세부용어상에만 제시된 교과목이 다수 있었다.
4. 교수협의회(2002)가 작성한 대학 치위생과 학습목표 기준 학습시간을 조사한 세부용어에 대입하여 비교한 결과 학습시간이 교과목상 세부용어와 다수 중복되어 나타났다.
5. 교과서 기준 다빈도 중복세부용어로는 잇솔질, 치면세마, 치아우식증, 치은염, 치주염, 티액이 3개 교과목 이상에서 중복용어로 나타났으며, 학습목표기준 학습시간과 비교분석한 결과 1시간~6시간의 학습시간이 배정되었다.

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