

## RESEARCH ARTICLE

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# Revised Subjects of the Current Korean Oriental Pharmacists' Licensing Examination

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## Abstract

This study is designed to draw out new integrated subjects of the Korean Oriental Pharmacists' Licensing Examination (KOPLE). In 2004, for the revision of subjects, we have analyzed the curriculums of the Oriental Pharmacy department, the oriental pharmacist's (OP's) job description book, and the elementary items of KOPLE. We also examined the system of the Chinese Herb Pharmacists' Examination and other health personnel licensing examinations and studied the data of items and compared them with KOPLE. We heard the public opinion on the present KOPLE. We developed a subfield of 18 subjects, a middle category of 188 items, and a small category of 1,026 items. We proposed a new KOPLE that consists of three subjects: basic oriental pharmacy, applied oriental pharmacy, and laws and regulations.

**Key Words :** *Validity, Korean Oriental Pharmacists' Licensing Examination, Subjects*

## INTRODUCTION

This study is to draw out the new unified subjects of the Korean Oriental Pharmacists' Licensing Examination (KOPLE) by examining the items of the KOPLE, and the curriculum and job description of oriental pharmacists (OPs). This work may help OP students have a capacity of synthetic thinking, which is required in the clinical situation. Also, we tried to determine the integrated subjects of the KOPLE for a future-oriented KOPLE. Finally, we arranged it into large, middle, and small categories.

## MATERIALS AND METHODS

We analyzed the curriculums of oriental pharmacy departments [1-3], the oriental pharmacist's (OP's) job descriptions

book [4], the elementary items of the KOPLE, the system of the Chinese Herb Pharmacists' Examination, and other similar health personnel licensing examinations. We also heard the opinions of oriental pharmacy professors, OPs, and would-be OPs. After that, we proposed integrated subjects for the KOPLE.

## RESULTS

The results showed that every Oriental Pharmacy department in Korea has been offering all subjects focused on the KOPLE, obviously implying that the KOPLE has been an absolute influence on the curriculums of the Oriental Pharmacy (Table 1). According to the results of an analysis of the data of the OP's job descriptions book, there are quite a lot of differences between the importance of the book and the

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**Table 1.** The task elements and proportion in the Korean Oriental Pharmacists' Licensing Examination listed in the oriental pharmacist's (OP's) job descriptions book

Classification	Main field subjects	The task elements				Licensing Examination		
		Frequency				Rate (%)	Number of items	Setting items rate(%)
		Knowledge	Skill	Attitude	Total			
1	Production and manufacturing of HM	54	56	0	110	10.6	40	16
2	Pharmaceutics of HM	358	149	2	509	49.0	110	44
3	Authentication of HM	83	49	0	132	12.7	35	14
4	Storing and marketing of HM	90	19	2	111	10.7	20	8
5	Basics of HM	49	16	0	65	6.3	45	18
	The others	66	45	0	111	10.7	0	0
Total		700	334	4	1,038	100.0	250	100

HM: Herbal Medicine.

**Table 2.** Chinese herb pharmacists' examination

Subjects	Number of items	Examination time (min.)	Remarks
Laws	100	150	
Chinese pharmacy expert knowledge (I)	100	150	Carried out for 4 days in October
Chinese pharmacy expert knowledge (II)	100	150	understand (60%) know well (30%) comprehension (10%)
Chinese pharmacy general knowledge and function	100	150	

proportion of KOPLE items, so that the book doesn't contain an equal proportion of KOPLE items. Therefore, it can be said that the current method of the KOPLE has mainly been set on knowledge-focused items regarding the evaluation of OP capability, as many as about 68. From the analysis of the passing rates on KOPLE for the past 3 years, there is no problem on the level of examination difficulty, the discrimination rate, and the passing rate. The system of the Chinese Herb Pharmacists' Examination has shown that the number of items is 400, which is 1.6 times as many as the ones in KOPLE (250), and the linking subjects integrated into 4 subjects have been administered, which is an upgraded system over the one in Korea (Table 2). On examination, in some similar health personnel licensing examinations, the number of KOPLE items approaches 45.5% compared with 550 (538 points), which is the number of medical licensing examination items, and is 50-80 less than the items set in pharmacists', nurses', and nutritionists' licensing examinations (Table 2). Based on Bloom's theory, research of the items among oriental pharmacy professors and OPs on the validity of the current KOPLE surveyed in 5 points that measure method has been carried out. The result has brought out that the overall validity rate of KOPLE, the degree that KOPLE reflects the curriculum of the oriental pharmacy, and the view on the measurement of

the lowest capability for OPs by KOPLE shows over 3 points that signify positive meaning, but the view on the measurement of the OP's problem-solving capacity shows less than 3 points, which is negative. The reason that the KOPLE should be integrated into 3 subjects is that the KOPLE is reciprocally related to one or the other subjects. A survey on the number of items in KOPLE has shown that the professors have an absolute preference for 350 items because it is necessary for the items to be increased for adequate evaluation through the KOPLE. Through a study of the data of items and a public hearing for the present KOPLE, it has been arranged that the KOPLE subjects are 'LAWS AND REGULATIONS', 'BASIC ORIENTAL PHARMACY', and 'APPLIED ORIENTAL PHARMACY'. The contents of subject 'LAWS AND REGULATIONS' are 'The Law of Pharmaceuticals and Narcotics', 'Korean Pharmacopoeia', 'Korean Herbal Pharmacopoeia' and 'The Law for Marketing of Herbal Medicine (HM)'. Contents of subject 'BASIC ORIENTAL PHARMACY' are 'Pharmaceutical Analysis', 'Pharmaceutical Botany', 'Pharmacognosy', 'Natural Products Chemistry', 'Herbology', 'Hygienic Chemistry' and 'Pharmaceutical Biochemistry'. The contents of subject 'APPLIED ORIENTAL PHARMACY' are 'Basics of Oriental Pharmacy', 'Processing of HM', 'Preparation of HM', 'Pharmacology of HM', 'Oriental Pharmaceutics', 'Marketing and Storing of HM' and 'Pharmacology'. Number of items of each subject is 50 for 'LAWS AND REGULATIONS' and 150 each for 'BASIC ORIENTAL PHARMACY' and 'APPLIED ORIENTAL PHARMACY' (Table 3, Fig. 1). Through collecting the extensive opinions and suggestions from the concerned professors and other professors on the KOPLE, we have arranged the KOPLE into large, middle, and small categories. There are 3 large categories, and 18 subjects as the subfield, 188 items as the middle category, and 1,026 small category items (Table 4).

**Table 3.** The unified KOPLE (draft)

KOPLE subjects	No. of items	Distribution of points	Detail subjects		Remarks
			Related subjects	Points	
Laws and regulations	50	50	The law of pharmaceuticals and narcotics	20	Gathered various laws and regulations
			Korean pharmacopoeia	10	
			Korean herb pharmacopoeia	10	
			Marketing regulations of herb medicine	10	
Basic oriental pharmacy	150	150	Pharmaceutical analysis	20	*1Main contents is toxicology *2Basic theory added
			Pharmaceutical botany	15	
			Pharmacognosy	20	
			Natural products chemistry	25	
			Herbalogy	35	
			Hygienic pharmacy*1	15	
			Pharmaceutical biochemistry*2	20	
Applied oriental pharmacy	150	150	The theory of basic HM*1	15	*1Various theory in different books made into one *2Essential in fields
			Processing of HM	20	
			Preparation of HM	35	
			Pharmacology of HM	25	
			Oriental pharmaceuticals	25	
			Marketing and storing of HM	15	
			Pharmacology*2	15	
Total	350	350	18	350	

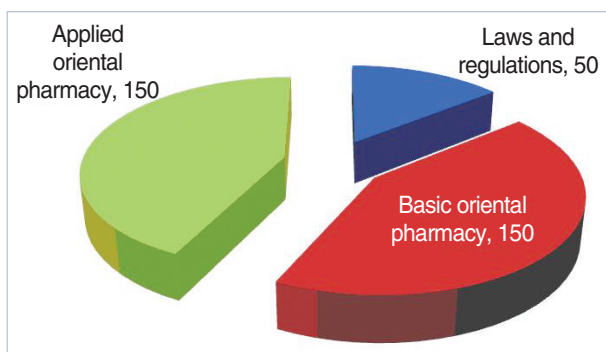
**Table 4.** The number of developed items in the KOPLE

Large categories (KOPLE)	Detail subjects	No. of developed items	
		Middle categories	Small categories
Laws and regulations	The law of pharmaceutical and narcotics	8	18
	Korean pharmacopoeia	3	91
	Korean herbal pharmacopoeia	2	184
	Law of marketing of HM	2	7
	Total	15	300
Basic oriental pharmacy	Pharmaceutical analysis	2	16
	Pharmaceutical botany	15	133
	Pharmacognosy (Experimental)	7	45
	Natural products chemistry	2	12
	Herbalogy	20	45
	Hygienic pharmacy	1	8
	Pharmaceutical biochemistry	11	38
	Total	58	297
Applied oriental pharmacy	The theory of basic HM	5	18
	Processing of HM	6	33
	Preparation of HM	66	195
	Pharmacology of HM	10	54
	Oriental pharmaceuticals	13	65
	Marketing and storing of HM	6	24
	Pharmacology	9	40
	Total	115	429
Total	18 subjects	188	1,026

## DISCUSSION

This study was designed to propose the new integrated sub-

jects of KOPLE, Three subjects are proposed like other health personnel licensing examination. Recently, the trends of the subjects of health personnel licensing examination is the inte-



**Fig. 1.** The unified KOPL. Unit: points.

gration and the emphasis of the practical skills. In this trends, subjects of KOPL was revised. This is the first stage of the progress for KOPL. Furthermore, the other performance test such as practical skill test, should be considered to be applied to KOPL.

## ACKNOWLEDGMENTS

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