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A Study on Block Patterns for of Korean Fashion Models

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졸업작품 패션쇼 모델의 치수에 적합한 원형 연구

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Abstract

To most of the students studying fashion related major, the graduation fashion show is a big challenge. They have to put together all they learn and show what they can do to their future employers. They design, pattern work, and make up garments for the show all by themselves. Unfortunately, while they make up their garments, they usually don't know exactly body measurements of the models. So quite often they have to alter their art works up to the last minute of the fashion show opening. Sometimes such unadequate work process ruins their work. The purpose of this study is to suggest block patterns of Korean fashion models measurements for basic items, such as jacket and pants for male models and torso length block pattern, skirt and pants for female models. 20 male and 20 female professional models were measured. The block patterns were based on their measurements. After the first fitting test, patterns were corrected by their body characteristic. For both male and female models, it was found desirable to fix the shoulder width and make an adjustment to the patterns with a deviation of width and girth items. In case of the resultant patterns the satisfaction was made better. Model sizes proposed in this study are considered closer to the size of average models, since they were based on A-grade models who are currently working in Korea. The resultant patterns can be produced by simply making a slight adjustment to the width of the proposed pattern in this study.

Key words: Block patterns, Measurements, Fashion model, Graduation fashion show; 원형, 치수, 패션 모델, 졸업작품쇼

I. Introduction

There are over 130 fashion related education institutions in Korea, including colleges and specialized institutes(Korean council for university education, Korean council for college education). Most of them require students to participate in a graduation fashion show or graduation fashion exhibition to graduate, and graduation fashion shows tend to be preferred, because they are more helpful for future career for their graduates through direct communication with people in charge of apparel industry as part of promotion strategies of the school.

Graduation fashion show can serve not only as the opportunity for students to show what they have learned, but also to experience how actual designing process works in fashion industry. For those students who have never experienced the process, however, all the process from design, making up, fitting, through show preparation could be a series of trial

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and error. For a fashion show in general, one or two designers are in charge of making design in accordance with the concept of the fashion and select appropriate models for the show, making clothing based on body sizes of the selected models before fitting is done. In the case of graduation fashion shows, however, since students usually develop their own design of different concepts and prepare clothing, the schedule may be delayed due to situations of individual students and most students make clothing without any model recruited for the fitting due to financial reasons. Consequently, for pattern making they use dress form 8 size or standard size for general ready-to-wear clothing, instead of model sizes. The clothing made in this way is not fit to the model, and it is often needed to modify after model fitting is done with half-made clothing. Sometimes, modification itself is impossible, so students have to make new clothes.

Therefore, it is necessary to develop a block pattern fit to professional fashion models in order to raise the level of perfection of graduation fashion shows and reduce trials and errors of students. In this respect, this study surveyed problems with graduation fashion shows and developed a standard block pattern for male and female fashion models with standard body sizes based on body sizes obtained from measuring of local fashion models in Korea.

II. Fashion Shows and Fashion Models

Having a significance beyond simply a show, fashion shows serve not only as a visual marketing tool to increase the production and brand image and promote sales in the fashion industry(Jang & Park, 2004b), but also as a means to display products through fashion models. In 1911, the ready-to-wear clothing industry in USA began first ever fashion shows where fashion models appeared, with the introduction of mass production technology and as part of sales promotion activities, and since the first fashion show in Korea was held at Bando Hotel in 1956, fashion shows had taken the form of designer invitations focusing on seasonal clothes for a customer service purpose until the 1980s. Since then in the 1990s, fashion shows have been popularized in a variety of forms such as advanced type of collections at a business-level, new brand launching shows, and graduation fashion shows by college students(Oh & Kim, 2003) and diversified by different place, planing and direction, and audience.

Generally speaking, with the aim of selling goods to consumers over the overall marketing stage from designers to manufacturers and retailers, every fashion show goes live, using creative elements such as active models and entertainment media, in order to present the audience with the latest fashion trends including colors, fabric, clothes, and accessories more effectively(Everett & Swanson, 1993). For a fashion show, performance of models such as facial expressions, make-up, and hairdo, including their cat-walk are significantly important to help the audience better understand the theme of the show(Jang & Park, 2001). The origin of the modern fashion models dates back to 1868 when famous french fashion designer Charles Worth had his wife wear the clothing he made and appear before the public, and the first true professional model of modern concept began with the boom of the US ready-to-wear clothing industry. Models need to express leading senses and trends. Their values are dependent on how fully they can display new products of the designer. This means that looking beautiful is not enough. Rather, they should be able to display the clothes that they are wearing more effectively to create profits as a most persuasive and influential marketing tool and as an agent of the product and the company to provide consumers new information on what to purchase. Therefore, beautiful body type and proportion is a prerequisite for a fashion model, along with higher height and lower weight than common people(Kim & Shin, 1992).

A fashion model means a professional who wears new products of a fashion designer for a promotion purpose, also called mannequin in French(Lee & Lee, 1997). According to Kim(2002), a model is an actor without words, who serves to add feelings to and enliven lifeless clothing, and true fashion models should be able to know how to express feelings with their body. In addition, Kim and Yang(2002) define

models as a fashion communication medium, with the ideal physical beauty, and Seong(2004) said that they serve to deliver ever changing image of fashion and set a standard for physical beauty. Accordingly, they are the most important part for directing a fashion show and display the clothes in person. As fashion designers work beyond national borders and become specialized, the role of a fashion model grows important, with the demand for models of various images increasing. A fashion model as an occupation is gaining popularity.

The focus of fashion model-related studies thus far has been on general situations of models(Kim & Shin, 1992), nature of fashion models and stress-related turnover(Kim, 2006), and satisfaction with their body (Song, 2000), together with studies on collection-related fashion models(Jang & Park, 2004a). In a study on fashion show clothes making, Park et al.(2006) pointed out problems with the dress form currently used at schools and the need of model-size dress form.

III. Methods and Procedures

1. Questionnaire Survey on Professors in Charge of Directing Graduation Fashion Shows

The study administered a questionnaire survey on ten professors who had directed graduation fashion shows of local colleges in Korea from February to March in 2008 or had directed before, with regard to preparation stages of graduation fashion shows and the problems, and types of block patterns necessary by item(Table 1).

2. Measurement of Body Sizes of Models

Body sizes of A-grade professional models in terms of experience and physical conditions were measured. A-grade models, 20 male and female respectively were selected for this study, who had appeared in the Seoul Fashion Artists Association(SFAA) fashion show for more than three years or in a world-class fashion show, with their body proportion being closer to the models' average(Table 2). By a director of DCM, in female models, their average sizes are bust girth 82~84cm, waist girth 61~64cm and hip girth 89~91cm and hight 175cm over. In male models, bust girth 90~94cm, waist girth 72~74cm and hip girth 93~96cm and height 184cm over are average. Measured body parts totalled 16-five girth items, eight length items, and three width items, required to make torso pattern and slacks pattern.

3. Block Pattern Making and Fitting Test

On the basis of standard sizes for A-grade models, jacket pattern and slacks pattern for men and torso pattern of less surplus, skirt pattern, and slacks pattern for women were made. Torso pattern and tight sleeve pattern of 「Pattern making manual」(Noëlle & Trouver, 1995) were made for women in the method used to make jean slacks pattern without dart and skirt pattern, whereas patterns for men were based on pleatless slacks pattern and jacket pattern in pattern design for men by Kim and Park(2004).

The fitting test was conducted on two A-grade male and female models, respectively, because B-grade models were considered not suitable for the fitting test for a study on size suitability of standard

Table 2. Measured female and male models' body size

A-grade	
Male	Female
20	20

Table 1. Survey subject

	A	B	C	D	E	F	G	H	I	J
Age	forties	forties	forties	thirties	thirties	thirties	thirties	thirties	thirties	thirties
Location	the Capital area	the Capital area	the Capital area	Seoul	Seoul	Seoul	Seoul	Seoul	Kyoung -nam	Junbook
Teaching years	10 times	10 times	8 times	6 times	5 times	3 times	3 times	2 times	5 times	7 times

block pattern, due to excessive deviation of their body sizes. 4 students who graduated from graduated school with a major in clothing construction participated in the appearance test and then the result shows by t-test.

IV. Results and Discussion

1. Findings from the Questionnaire Survey on Professors in Charge of Directing Graduation Fashion Shows

1) Findings from the Survey on Preparation Stages of Graduation Fashion Shows

Preparation stages of the graduation fashion show were found somewhat varied by school as in <Table 3>. As far as design was concerned, most schools did not use muslin to evaluate a design, and rehearsal was found to be made necessarily on the day of the show, while some schools had a rehearsal on the day before the show in order to see if any modification would be needed to the clothing to prevent emergency on the day of the show.

Preparation stages were divided largely into determination of design, dress making, rehearsal, and fashion show, and the period from designing and having the show usually took four months or over, depending on schools. It took four to eight weeks to determine the design for the show, and usually the determination is based on illustration only. Subsequently, the determined design may be further tested with muslin and repeat assessments from time to time during the preparation period and modifications of the design up until model fitting. Actual dress making takes 8 to 10 weeks, and prior to making clothes with actual materials, they are made with muslin to check possible problems with the pattern and the dressmaking. Model fitting before the garment is complete is rare, and in the case of a half-fitting, students with similar sizes or dress forms are used instead. In most cases, once or twice model fittings are made, but a first and only fitting is common one or two weeks before the show. Rehearsals are usually conducted in the morning of the day of the show, or in some cases, on the day or the week before the show. If the fashion show schedule is set from the beginning of the semester, rehearsals are often conducted at the end of the previous semester. Time needed for each stage is as in <Table 4>.

2) Findings from the Survey on Dress Making

Once the design is determined, pattern is made for the clothes, on the basis of draping or flat cut depending on the characteristics of the design. Unlike ready-

Table 3. Processing order of fashion show for graduation

Contents		Processing Order					
		I	II	III	IV	V	VI
Design Part	Concept Decision	1	1	1	1	1	1
	Design Submission	2	2	2	2	2	2
	Design Screening-Illustration	3	3	3	3	3	3
	Design Screening-Muslin	4	**6**				**6**
Making up Part	Pattern Making(Draping/Flat Pattern)	5	**4**	4	4	4	**4**
	Muslin Making up	6	**5**	5	5	5	**5**
	Fitting in Half Finished	7	7	6	6		
	First Fitting	8	8	7	7	6	7
	Second Fitting	9	9		8	7	8
Rehearsal	Rehearsal on Preceding Day	10	10	8	9	8	
	Rehearsal on the Day	11	11	9	10	9	9
Fashion Show		12	12	10	11	10	10
Total		2	2	2	1	1	2

Table 4. Period per processing step of graduation fashion show

Contents		Period per Processing Step					
		I	II	III	IV	V	VI
Design Part	Concept Decision	2/6~8 weeks	2/2 weeks	2/6~8 weeks	1 week	2 weeks	1~2/2 weeks
	Design Submission	4 weeks/in period	4/2 weeks	2/2 weeks	1 week	2 weeks	3/3 weeks
	Design Screening-Illustration	1 week/in period	1/2 weeks	1/2weeks	2 weeks	2 weeks	1/2 weeks
	Design Screening-Muslin	1 week	1/2 weeks				1/2 weeks
Making up Part	Pattern Making (Draping/Flat Pattern)	3/1 week	4/2 weeks	2/4 weeks	2 weeks	2 weeks	2/2 weeks
	Muslin Making	2/1 week	2/2 weeks	1/2 weeks	2 weeks	1 week	1/1 week
	Fitting in Half Finished	1 week	1/2 weeks	1/2 weeks	1 week		
	First Fitting	1 week	1/4 weeks	2/1 week	3 weeks	1 week	2/2 weeks
	Second Fitting	1 week	1/2 weeks		4 weeks	1 week	2/2 weeks
Rehearsal	Rehearsal on Preceding Day	1 day	1 day	1 week/1day	1 day	1 day	
	Rehearsal on the Day	1 day	1 day	1 day	1 day	1 day	1 day
total		2	2	2	1	1	2
Fashion Show							

to wear clothing, most garments for the show are in experimental design, which requires a more efficient way. According to <Table 5> summarizing pattern making methods by item, draping is preferred for volumed clothing such as a dress or silhouette and tightly fitted one like a bustier, while flat pattern making for jackets or coats of broad width or slacks, in particular. This is considered because jackets are hard to adjust sleeve pattern, shoulder width and the amount of shoulder pad, and slacks are too difficult for draping, with less practical effect.

Table 5. Pattern making method by item

Item		Percentage(%)	
		Draping	Flat Pattern
Dress	Bodice	54	46
	Skirt	64.5	35.5
	Dress	60	40
Upper Garment	Bustier	68	32
	Upper Garment	37	63
Lower Garment	Skirt	45.5	54.5
	Slacks	28	72

As mentioned earlier, interim fitting is done through a student model or with a dress form, and the final fitting is done with the model who actually is to appear in the show. Model fitting takes a significantly long time, because it is done almost at the last stage of the preparation. Although fitting time is varied by the number of clothes per model, at least 15 minutes per garment is general. At a graduation fash-

Table 6. Repair contents in model fitting

Repair Part	Contents	Detail
Bust Girth	Increase Decrease	Without exact size chart, bust girth part is add or subtract the corrected amount. Models' body size deviation is various.
Sleeve Girth	Increase Decrease	Sleeve length is added the amount of the adjustment by pinning or measuring.
Thigh Girth	Decrease	without exact thigh girth, generally thigh width is decreased.
Clothes Length	Increase	Because model is taller than common people, most of length part is increased.
Sleeve Length	Increase	
Slacks Length	Increase	
Etc.		In complicated design, production of flat pattern is dissatisfied. Add and subtract the correct amount in hip line & crotch area.

ion show, A and B-grade models often appear together, and due to wide deviation of body sizes, even block patterns or dress forms of same sizes are modified for almost all of the model. In this case, parts to modify are different by model, and sizes are varied, which is because there is no standard model size chart, and respective dress form or block pattern. Alternations most frequently made for model fitting are as in the following(Table 6).

Besides, how to interpret the pattern for dressmaking is a question, because the show garments should be different from common ready to wear clothes, and since only bust, waist, and hip girth of the models are available, models of the same sizes in these parts may have a huge difference in sizes of other body parts. Clothes for the show are often tightly fitted to the body, but it is hard to set sizes correctly, because precise body sizes of the models are not available. Since slacks, in particular, are set to general sizes for pattern making, they are often modified greatly after the first fitting, or sometimes made again. In addition, graduation fashion shows frequently face change of models, and as a result, models with the sizes fit to the clothes are often selected, regardless of the mood of the clothes. Accordingly, many insisted on the need for standard model sizes and block patterns by item. In regard to the need of block pattern, all the participants responded 'Yes', while some participants said that body suit and torso pattern were needed. This is considered because the torso pattern can be used as an alternative to the bodice pattern and as a dress pattern(Table 7).

2. Findings from Measurement of Body Sizes of Models

<Table 8> shows the average sizes and standard deviation of A-grade models who appeared in the 2008 SFAA fashion show and compares them with the average sizes of the standard body type of those in their 20s of Korea, released by Size Korea(2005).

The comparison of average sizes of general women

Table 7. Required pattern type

	Bodice	Skirt	Slacks	Sleeve	Body Suit	Torso
Female	10	10	10	10	2	1
Male	10	0	10	10		1

Table 8. Main body size comparison of Models and 20' adults

		Female Model mean	STDV	Twenties Female	Male Model mean	STDV	Twenties Male
Girth	Bust	83.0	2.68	82.2	90.5	2.98	95.6
	Waist	63.0	2.64	67.3	74.1	2.83	77.7
	Hip	90.6	2.54	90.8	95.2	2.21	94.5
	Upper Arm	25.1	1.09	25.5	29.7	1.57	29.7
	Thigh	50.6	2.12	53.7	52.8	2.20	56.4
Length	Height	176.1	2.29	159.7	186.8	1.72	173.5
	Back	38.8	2.24	38.8	44.2	1.33	41.8
	Sleeve	58.5	2.36	53.2	62.1	2.17	58.3
	Elbow	31.3	4.44		33.5	3.86	
	Leg	112.5	2.66	99.4	116.3	1.83	107.4
	Knee	59.5	4.62	58.7	61.1	2.05	63.2
	Crotch	26.3	0.91	27.2	27.4	0.91	27.8
	Front N.P to B.P	22.9	1.95	24.9			
Width	Across Front	31.5	1.74	31.1	36.9	1.52	36.3
	Across Back	31.7	1.88	34.5	38	2.34	38.6
	Shoulder	39.2	1.34	39.9	45.2	1.93	43.4

and female models indicates that models are taller than general women, and their bust girth are larger but waist girth are relatively smaller. However, their shoulders are much wider than general women, while sizes of width are similar or far smaller, and therefore, those block patterns with adjustments in length only on the basis of general sizes are seriously inappropriate for models. Namely, models are wide in their shoulders, with smaller bust and waist girth, and especially, across front and across back are smaller, which raises the question how to remove surplus in these areas at the time of fitting. In short, models are slender and slimmer than common people, and have a huge difference in shoulder width and all of the length items from them.

Similarly, male models are also slender and slimmer than general men, with wider shoulders, despite smaller bust and waist girths. Moreover, they have shorter crotch length, and leg length ratio against height is higher than general men as well. As mentioned above, body sizes of models are different from general people, with a significant difference from the dress form on the market and flat pattern based on general ready-to-made sizes. As clothes for graduation fashion shows made with the dress form and flat pattern are significantly different from body sizes of models, much time is consumed for model fitting.

During measuring models' body size, models were given an interview. Models suggested that basic patterns of standard model sizes be available to reduce fitting time, pointing out that fitting for graduation fashion shows took too much time, and clothes were often not well fitted even after the fitting, among others. They added that clothes were mostly shorter in length and loosed around the bust, thigh and upper arm, emphasizing thorough finishing process. This is because students are pressed for time to prepare for the show following the model fitting, they did not have enough time to invest much time in size correction to make their clothes perfect.

3. Findings from the Block Pattern Making and Fitting Test

Results of the survey affirmed the need for block pattern fit to the standard sizes for male and female models. Therefore, the study developed a block pattern for basic items fit to physical characteristics of male and female fashion models, which was developed with pattern making method with less surplus considering the nature of clothes for graduation fashion show, and shape of the pattern and actual pattern making method and sizes are as follows:

All patterns were made from standard size chart of books. After the pre-fitting test, all patterns were corrected by fitting models' body size. For female models, torso pattern, skirt pattern, and slacks patterns were made, which can be used as bodice block pattern and dress block pattern. For the female models whose shoulder width is bigger than bust girth and across front, as the arm hole line from shoulder point and across front width up to across back width is inappropriate, across front was increased to around 0.25cm and across back to around 0.75cm so as to make the armhole girth starting from the shoulder line natural. It is desirable to modify the pattern by changing the deviation of front and back width, and bust girth, while the shoulder width of the torso pattern of the sizes proposed in the study fixing to 39.2cm, average size of models. neck girth got from bust girth is so tight, and side neck point and front neck point were moved 0.5cm to extend neck girth. Torso side line is longer than the armpit position of models, so activity of arms put restriction. Sleeve width and wrist girth, totally, is so narrow, so it is difficult that hands pass. Therefore A.H depth is was dig down 1.25cm, and width and A.H depth of sleeve is corrected(Fig. 1).

The proposed sleeve length was longer that the measurement, including surplus needed for actual dressmaking. In addition, armhole depth-based calculation was used to make the sleeve cap, resulting in a slim pattern of which sleeve length is longer that sleeve width, with less dart(Fig. 1).

Fixed hip length of ESMOD pattern is longer than actual model's body size, so hip length of torso and skirt, slacks pattern are corrected into actual measurement. For the skirt pattern, since the deviation of hip girth of female models is smaller than the bust girth, the side line of the pattern was moved from the

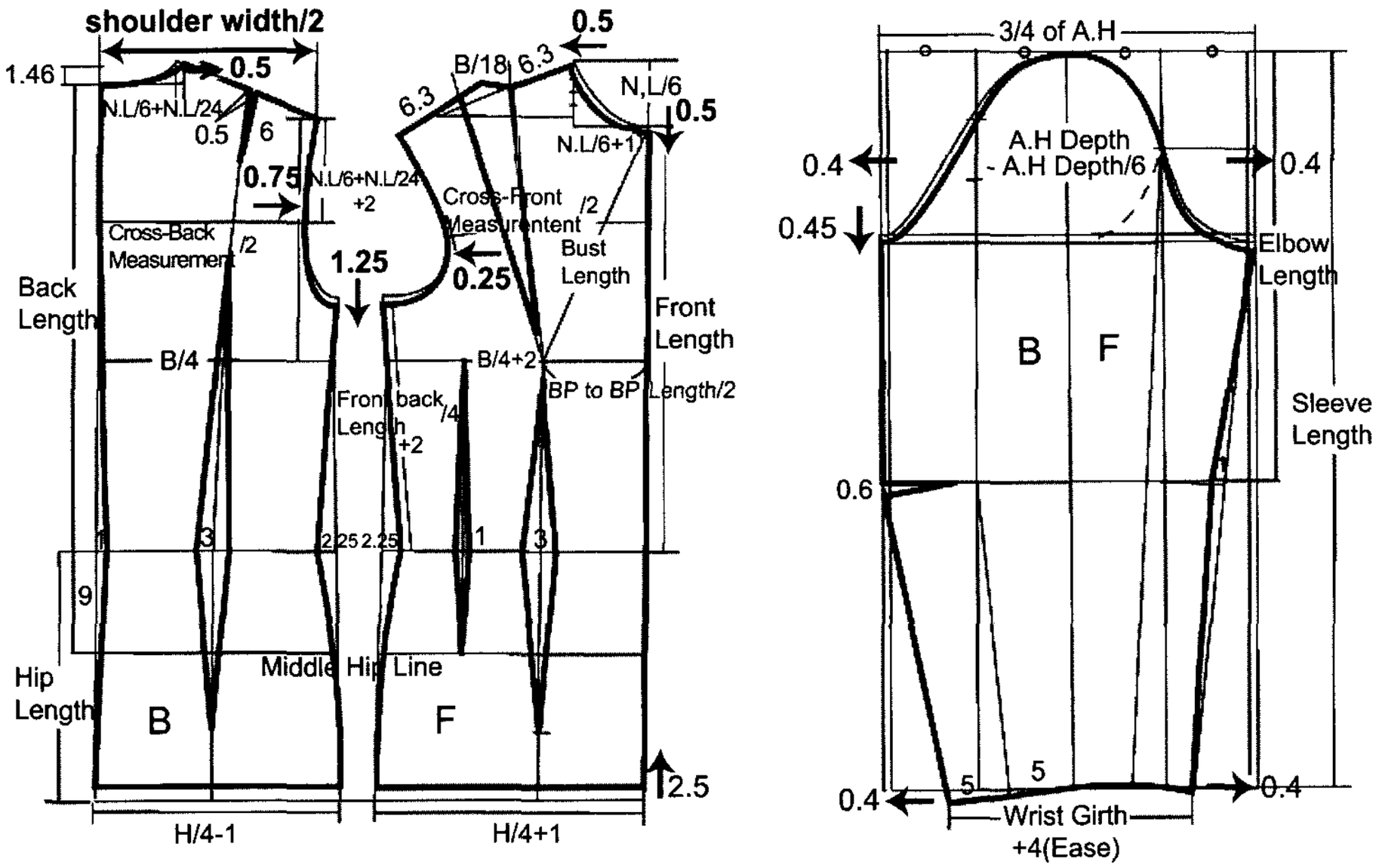

Fig. 1. Torso & Sleeve pattern of female model.

hip girth line, depending on the degree of the deviation. However, it is possible to make an adjustment *without any change in silhouette of the pattern* by moving the side line as much as the degree of the deviation of the proposed pattern, as an around 1cm adjustment was required by the deviation of model body sizes.

In aspect of models' body proportion, back side is wider than front side in the lower part of body. Side line is moved to front side around 1cm. Also front darts are moved to center front, because interval of center darts is so wide in a aesthetic aspect(Fig. 2).

In <Fig. 3>, slacks patterns are made on the basis of hip girth and crotch length. The pattern used in this study, unlike other block patterns, was sharply inclined at the center back and center front, which made the side line from the hip girth and the thigh almost straight. This is for the purpose of making the side line from the waist up to the hip straight so as to better fit to a curve, as leg length is growing. Curve of side lines is corrected to gentle, specially front center line is leaned around 1cm. Back waist girth is extended and crotch depth is deeper 0.5cm, according to models' feeling and activity of wearing.

Slacks patterns also may need an adjustment depending on the deviation of model body sizes. Standard sizes for slacks pattern are crotch length and hip girth line by which the crotch width and slacks width are determined. In practice, slacks width is determined

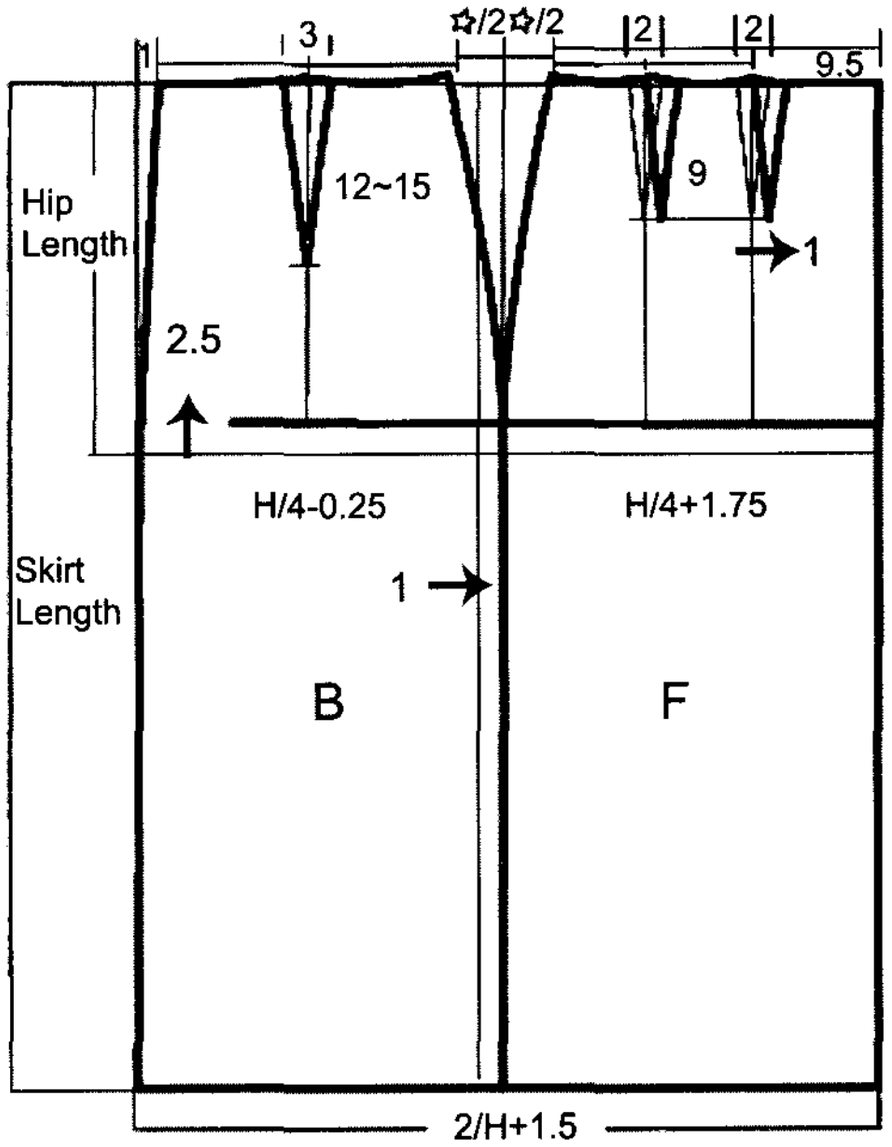

Fig. 2. Skirt pattern of female model.

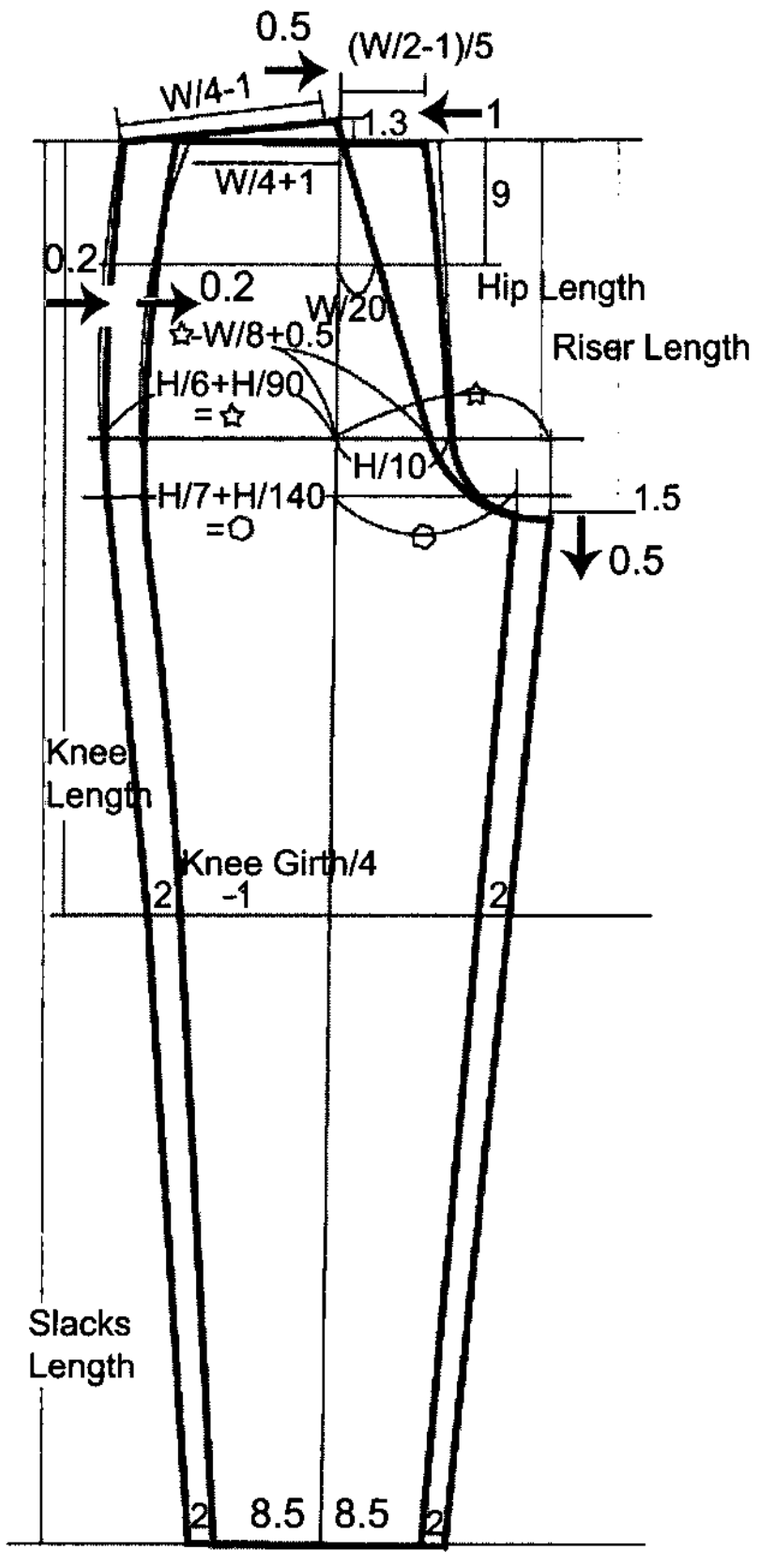

Fig. 3. Slacks pattern of female model.

by hip girth in pattern making, which applies to the overall width, not crotch width. Therefore, if any adjustment to slacks pattern is needed depending on body sizes, application of different deviations and crotch widths of front and back will result in more natural silhouette and improved fitness, with both body sizes and body type taken into consideration.

For male models, most common item jacket pattern and basic slack pattern were made. Because most items of men's outerwear are jackets and coats and it is possible that jacket block pattern is changed to coats pattern in fashion show. The number of body sizes are taken into consideration for the jacket pattern for male models, unlike other patterns. The jacket pattern used in this study had the surplus suitable for general men, but slight adjustment is needed for trendy tight jackets(Fig. 4).

It is desirable to reduce both front and back width by 1cm, the waist girth by 9cm. Reducing the waist girth line at the back center by 1cm and adjusting the line below the waist diagonally up to the trim can make the hip line natural. It is better to fix the shoulder width and adjust width and length, as in the pattern for women, which is because male models had little deviation of the shoulder width. On this study, the shoulder width of male model is used 43cm

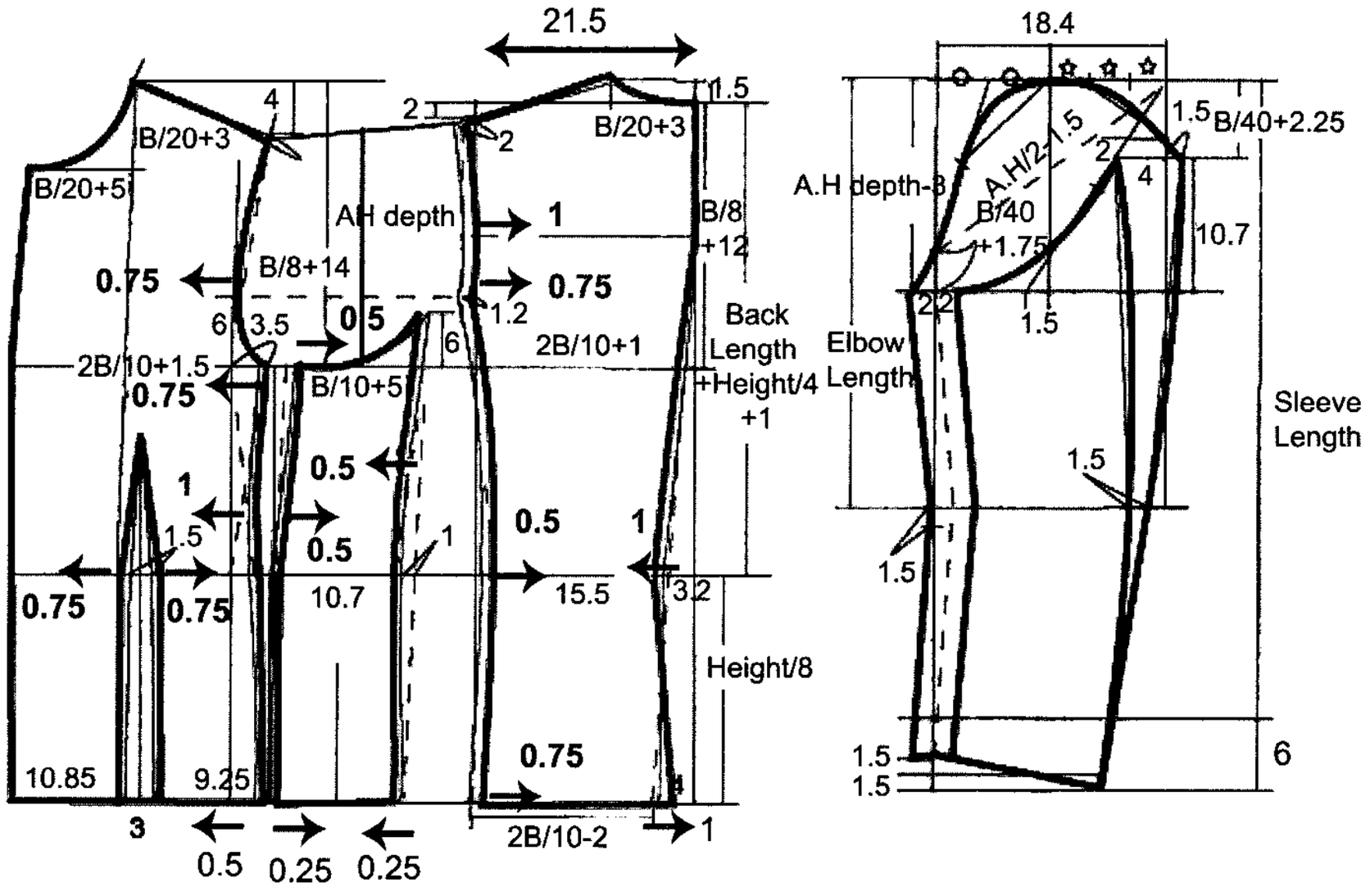

Fig. 4. Jacket pattern of male model.

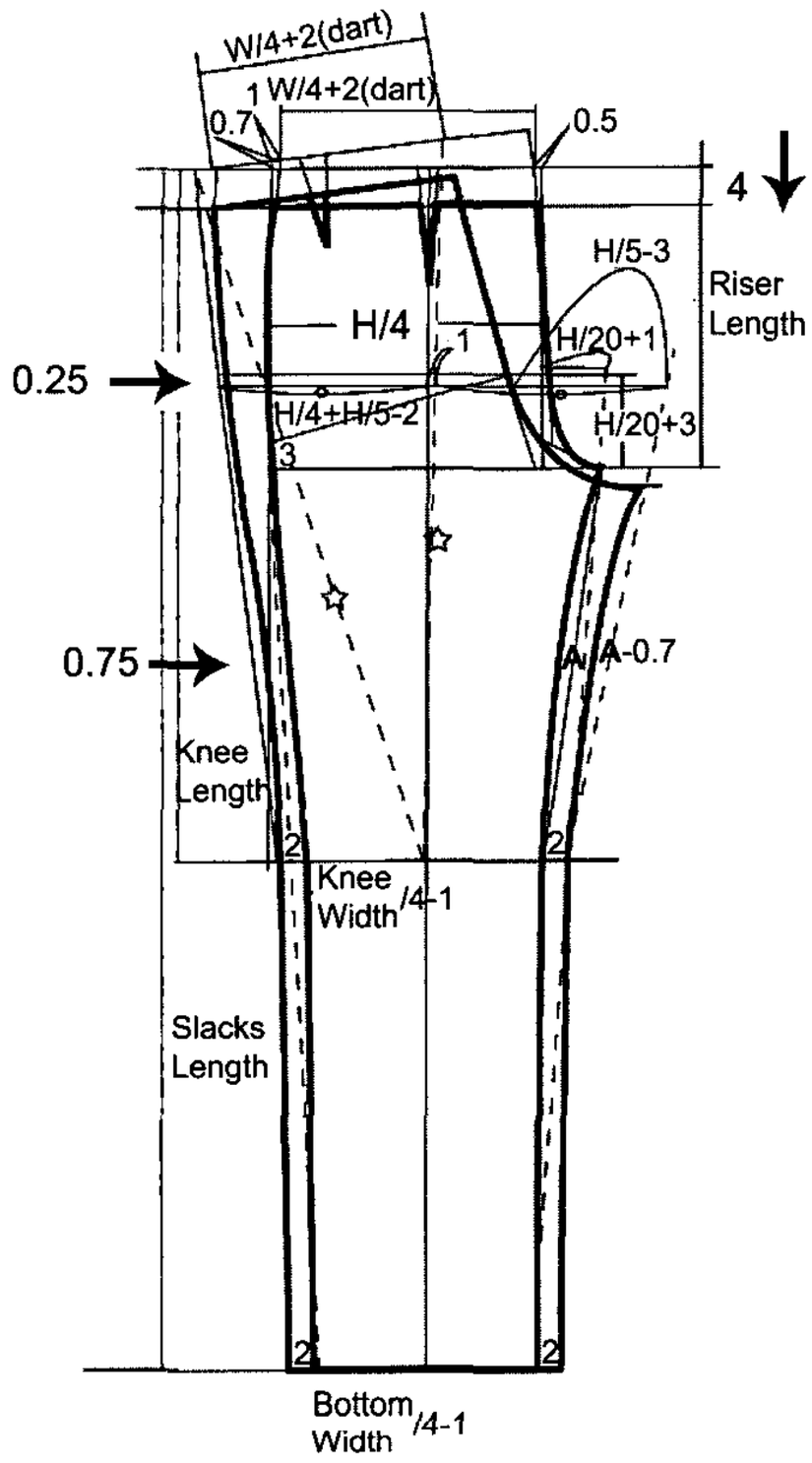

Fig. 5. Slacks pattern of male model.

because it is used the trendy jacket in SFAA fashion show. As the jacket pattern had sufficient surplus around the bust unlike the pattern for female models, slight adjustment to the width will enhance fitness. As a slacks pattern for male models, the pleatless one with relatively less surplus was selected.

In the case of male models, the deviation of leg length by height may be over 5cm, which was excluded from fitness assessment, because it is one of the length items and does not make a big difference in overall fitness. Back side line is corrected into gentle and fitted. Totally crotch length is decrease and waist line is low according to fashion trend. Unlike those for female models, it is hard to find tight design, and the pattern for common suits with the least surplus is ideal for a basic pattern, rather than tight slacks patterns. This is because tight slacks are often used for graduation fashion shows characteristically, and transformation into slacks with ample surplus is easier than the opposite case(Fig. 5).

The following is fitting test of the A-grade male and female models wearing flat patterns as proposed earlier. <Table 9> shows major body sizes of 2 male and female models participated in this fitting test

Table 9. Body size of male and female model

	Bust Girth	Waist Girth	Hip Girth	Back Length	Sleeve Length	Slacks Length	Across Front	Across Back	Shoulder Width	Height
Female Model	83.2	63.0	90.5	38.0	60.5	111	33.5	33.0	39.0	175
	84.0	64.5	91.0	39.0	58.0	110	32.5	34.5	40.0	175
Male Model	93.5	75.0	95.0	43.5	62.5	112	37.0	38.0	44.5	184
	91.0	72.0	92.5	43.5	62.5	115	37.5	36.5	43.5	187

Table 10. Fitting test of female model and male model

Valuation Item		Female Model					Male Model				
		Basic Block Pattern		Research Pattern		t-value	Basic Block Pattern		Research Pattern		t-value
		mean	stdv	mean	stdv		mean	stdv	mean	stdv	
Torso & Jacket	Bust Girth	4.53	0.42	4.60	0.39	1.29	3.20	0.80	4.16	0.74	2.44*
	Waist Girth	4.60	0.47	4.62	0.49	0.92	2.73	0.78	3.29	0.75	2.16*
	Neck Girth	3.57	0.61	4.44	0.47	3.55**	4.38	0.53	4.71	0.51	2.12*
	Across Front	2.92	1.06	3.32	0.84	1.45	4.32	0.84	4.64	1.01	1.10
	Across Back	3.62	0.69	4.32	0.40	5.26***	2.84	0.76	3.90	0.97	3.03**
	Waist Line	4.45	0.44	4.50	0.52	0.47	4.19	0.75	4.27	0.67	0.39
	Shoulder Width	3.37	0.78	3.58	0.81	1.22	3.08	0.67	3.97	0.79	3.58**
	Sleeve Length	4.72	0.74	4.60	0.94	-0.32	4.24	0.77	3.78	1.10	1.51
	Sleeve Girth	2.82	0.52	3.77	0.49	2.92*	3.22	0.84	3.95	0.77	2.44**

Table 10. Continued

Valuation Item		Female Model					Male Model				
		Basic Block Pattern		Research Pattern		t-value	Basic Block Pattern		Research Pattern		t-value
		mean	stdv	mean	stdv		mean	stdv	mean	stdv	
Slacks	Waist Girth	4.20	0.58	4.36	0.57	1.16	4.20	0.32	4.40	0.30	1.41
	Hip Girth	3.93	1.10	4.34	0.69	1.17	3.42	0.90	4.12	0.82	2.90*
	Waist Line	4.62	0.82	4.70	0.90	0.17	3.40	0.55	4.60	0.45	3.77**
	Side Line	3.84	0.90	4.40	0.76	2.50*	0.35	0.92	4.20	0.71	4.58***
	Crotch Ease	3.02	0.45	3.90	0.74	3.86**	0.34	0.89	3.50	0.63	1.39
	Slacks Length	3.41	0.79	3.44	0.80	1.24	3.31	0.84	3.38	0.94	0.31
Skirt	Waist Girth	4.33	0.58	4.41	0.57	1.14					
	Hip Girth	3.77	0.98	3.89	0.74	1.15					
	Skirt Length	4.27	0.98	4.30	0.77	0.14					

*p<.05, **p<.01, ***p<.001

who were selected from A-grade models appeared in SFAA fashion shows. Following to <Table 10>, the patterns for female models have almost no surplus, with muslin fitted depending on the model's body line, and fitness of the shoulder width and overall girth items appears appropriate. Skirt and slacks patterns are fitted around the hip girth line, well fitted from the waist to the hip in the center without unnecessary pleats.

In the case of male models, jacket and slacks patterns were found to have appropriate surplus, and in the case of tighter jackets, waist girth should be adjusted without any change in the shoulder width. In particular, slight adjustment in the waist at the back center will result in a more natural side curve. In result of fitting test, research block pattern show superior result than block pattern in the most valuation items. The research patterns are appropriately corrected to fashion models' body size. In female models' Torso pattern, neck girth, across front and across back areas are improved. As side line of torso is decreased, across back and sleeve girth look comfortable, and in male models' jacket pattern, totally girth parts are made better.

V. Conclusions

This study aimed to propose block patterns fit to standard model sizes, in order to reduce trials and errors caused by clothes not well fitted to the model sizes in the course of graduation fashion shows and make clothes more efficiently.

First of all, a questionnaire survey was administered on professors who were in charge of graduation fashion shows at colleges in Korea, in regard to preparation stages for the shows, required block patterns, and other problems with the show. As a result, it was found that a lot of repair works were needed at the time of model fitting, together with other problems due to wrong sizes, and participants raised the need of block patterns for basic items, fit to model sizes. This is because model sizes have been limited to bust, waist, and hip girth so far, with no data on sizes of other body parts available.

Therefore, 20 A-grade male and female fashion models currently working in this field were selected to measure body sizes and thereby made patterns based on the averages of the size. Compared to general people, models are slimmer and slenderer, with higher height and longer legs. In the case of female models, they are wider in their shoulder than general women, while having smaller bust and waist girth as well as less difference between the back and front width in the standing posture with their shoulder opened, which is the same as male models. They were found to have a higher ratio of leg and sleeve length, in general.

Torso, skirt, and slacks patterns for female models

and jacket and slacks patterns for male models were made with muslin, and fitting test was conducted on 2 male and female A-grade models. The patterns were found to be fitted well, and for both male and female models, it was found desirable to fix the shoulder width and make an adjustment to the patterns with a deviation of width and girth items. Also, the deviation of the bust and waist girth could be adjusted to around 4cm and width of each pattern to 0.75~1cm so as to make pattern modification possible. For female models, the tightest slacks patterns were used, without surplus around the hip. Although they could be used for tight ones or with somewhat stretchy materials, otherwise it is better to adjust the width and crotch width of the hip girth line. In addition, depending on the characteristics of body type, differentiating the deviation of the front and back would be possible. Slacks for male models were found fitted well relatively without the need for adjustment, and overall deviation of girth was as small as around 3cm, which resulted in a slight adjustment. However, the huge deviation of leg length against height would require an adjustment of length by model, which did not have an effect on the overall fitness.

In sum, model sizes proposed in this study are considered closer to the size of average models, since they were based on A-grade models who are currently working in Korea. Although sizes of the pattern could be changed by the deviation of body sizes by model, well-fitted patterns can be produced by simply making a slight adjustment to the width of the proposed pattern in this study.

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요 약

국내 패션관련 교육기관은 대부분은 졸업작품쇼를 행하고 있는데, 학생들이 직접 제작하는 작품쇼의 경우는 시간적, 경제적인 여유 부족과 정확한 모델 치수 및 이에 따른 인대와 원형패턴의 부재로 의상 제작 후, 사이즈 수정에 많은 시간을 허비하게 된다. 따라서 본 연구는 대학의 졸업작품 진행 과정의 문제점과 필요한 원형의 종류를 조사하고, 현역 A급 모델의 신체 치수를 계측하여 표준 사이즈를 조사하였다. 이를 토대로 아이템에 따른 원형을 제작, 이를 현역 모델에 착장하여 졸업쇼를 위한 기본 패턴을 제시하고자 하였다. 졸업작품쇼는 학교에 따라 진행하는 과정과 기간에 차이를 보이지만 대부분 모델 가봉 후 수선 정도가 많고 경우에 따라서는 의상을 새로이 제작하여야하는 경우도 발생하여 모델 사이즈의 기본 원형에 대한 필요성이 많이 나타났다. 모델의 신체 계측결과 모델은 일반인에 비해 슬림하고 가는 체형이며 키가 크고 다리가 길다. 여자의 경우 어깨너비가 일반인에 비해 넓지만 가슴둘레와 허리둘레는 더 가늘게 나타났으며 어깨를 편 바른 자세여서 뒷품과 앞품의 차이가 적었다. 이는 남자 모델의 경우도 같게 나타났고 전체적으로 다리길이와 소매길이의 비율이 크게 나타났다. 여자의 경우 토르소와 스커트, 바지 패턴을, 남자의 경우 재킷과 바지 패턴을 머슬린으로 제작하여 현재 활동 중인 A급 남녀 모델 각각 2명씩에게 착장하였다. 제작원형들은 그 맞음새가 모두 적절하였고 남녀 모두 상의 경우는 편차가 적은 어깨너비는 고정하고 품과 둘레항목에서 편차를 주어 패턴을 수정하는 것이 바람직하다. 하의의 경우 여자 모델은 엉덩이 부분에 여유가 없는 바지원형을 설계 제시하고, 이는 타이트 핏 팬츠나 스트레치 소재에 사용에 적절하고 여유있는 바지의 경우는 엉덩이둘레 폭과 밑위너비 폭에 변화를 주는 것이 바람직하다. 남자 모델의 경우 하의는 비교적 잘 맞아 수정이 필요한 부분이 없었으며 전체적인 둘레 편차 역시 3cm 내외로 작아 수정의 폭은 작다. 다만 키에 따른 다리길이 편차가 심해 모델에 따라 길이조정이 필요하지만 전체적인 맞음새에 영향을 주지 않았다. 이와 같이 본 연구에서 제안한 모델 치수는 현재 우리나라에서 활동하고 있는 A급 모델을 기준으로 제안되었으므로 평균적인 모델 치수와 근접하다고 할 수 있다. 또한 연구패턴 역시 현재 모델의 신체에 적절하게 잘 맞았으며 모델 개인에 따른 신체 치수의 편차에 따라 차이를 보이겠지만 본 연구에서 제시된 패턴의 품 조절만으로도 충분히 잘 맞는 패턴으로 사료된다.