

# Public Value

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### Effect of the High School Students' Perspective of FUTURE ORIENTED TIME on the Actions for the Career Path Preparations: Mediating Effect of the Self Leadership and the Motivation for Career Path

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#### Abstract

**Purpose:** The young adults today are increasingly worried about their career path as they watch the rapidly changing future society, emergence of new jobs, and the disappearance of promising jobs since the advent of the fourth industrial revolution. Preparing for the career path is related to the perspective of future oriented time in the sense of practicing the present actions, mindful of the future. This study sought to explore the effect of the high school students' perspective of future oriented time on the actions for the career path preparations, and also explore the influence of self-leadership and motivation for the career path in this process.

**Method:** A survey questionnaire was conducted for 650 high school students in Gyeongbuk, Daegu, Gyeongnam, and Ulsan regions, and the data of 565 students were finally analyzed, while the data were analyzed by using the structural equation model. The data collected for the statistical validation of the research model were analyzed by using the SPSS 18.0 for Windows and AMOS 22.0 programs in order to analyze the structural equation model for the causal relationship between the descriptive statistics and the research model, and also analyze the mediating effect by using the bootstrapping method and the phantom model.

**Results:** As a result of the analysis performed, each of self leadership and motivation for the career path related mediating effects were discovered in the relationship between the high school students' perspective of future oriented time and the actions for the career path preparations, and the high school students' perspective of future oriented time demonstrated self leadership and motivation, with the double mediating effect discovered to influence the actions for the career path preparations through the career path. As a result of the multi-group analysis performed to examine the differences among the structural relationships according to the gender of young adults, the path from the perspective of future oriented time towards self leadership, path from self leadership towards the motivation for the career path, and the actions from motivation for the career path preparations demonstrated differences between men and women in the path for the career path preparations. Such results imply that it is necessary to consider the perspective of future oriented time, self-leadership, and motivation for career path as important variables in promoting the actions for the career path preparations.

**Conclusion:** The structural model was validated to analyze the relationship between the perspective of future oriented time and self leadership, motivation for career path, and the actions for the career path preparations. Consequently, the effect of the perspective of future oriented time on the actions for the career path preparations was verified, and the mediating effects of self-leadership and the motivation for career path were further specified in the process. This implies that the perspective of future oriented time, self leadership, and the motivation for career path are among the important variables to consider when developing and applying various activities for promoting the actions for the career path preparations in school.

**[Keywords]** Future Oriented Time, Perspective, Self Leadership, Motivation for Career Path, Career Path Preparations

## 1. Introduction

The young adults today are increasingly worried about their career path as they watch the rapidly changing future society, emergence of new jobs, and the disappearance of promising jobs since the advent of the fourth industrial revolution. As the most representative concerns of young adults are their academics and career paths, young adults have many thoughts and concerns revolving their academic stress and future career path. In particular, in the case of the general high school students, they would spend most of their time solely on advancing to college regardless of their career path and aptitude[1]. Hence, important developmental tasks have also become focused on the academics, and the career intervention from an appropriate perspective is significantly inadequate. Career counseling for the young adults should not be the only goal of advancing to college, but should also help them prepare and act on their own in the course selection and college selection process so that they can continue to develop their occupational competency even after entering their college. Towards this end, it is necessary to emphasize not only the cognitive and attitude related aspects including the existing intellectual ability, aptitude, personality, interest, and career decision level, but also on the actions for the career path preparations as the actions to implement their appropriate career decisions[2].

The actions for the career path preparations are the specific action related methods for the career path. The actions for the career path preparations significate as to what extent effort they put into deciding their own career path and how much they are practicing to achieve their career goals. After deciding on a career path, it is apparent that the question of what is concretely practiced to achieve the determined career goal would have a far more important meaning[3]. Meanwhile, when preparing for a career would mean practicing the present behavior with the future in mind, the perspective of future oriented time may be considered to be a variable which can help carry out the actions for the career path preparations. The perspective of future oriented time is among the sub-variables of the time perspective, and also refers to regulating and controlling the present behavior by recognizing that one's present behavior is connected to the future by placing the value in the future. It was claimed that the perspective of future oriented time among the sub-variables of time demonstrates a positive correlation with the actions for the career path preparations[4].

Self-leadership is leadership which exercises influence over oneself by changing one's own thoughts and actions. During the young adult period, particularly for the high school students, one needs to think and act independently as one prepares for college or employment. Hence, it is more important for the high school students to have their self-leadership than ever[5], and the young adult period may operate as a positive opportunity in terms of personality by building their relationship with various people and setting a vision for the future, which was claimed to be the decisive period for the self leadership development[6].

The motivation for career path is defined as one which exercises influence over the career goals and career related decision-making behaviors by exerting an individual's career identity, insight into the factors affecting one's career, and flexibility[7]. In the model of motivation for career path, it was claimed that in order to form the motivation for career path, personal and situational characteristics related to the career and the interaction between actions and decision-making are needed. Examining the previous studies related to the motivation for career path, it was claimed that the motivation for career path mediates the relationship between the self leadership and career decision-making self-efficacy[8], and the greater the motivation for career path, the greater the level of the actions for the career path preparations[9]. Furthermore, the past positivity, present pleasure, and the perspective of future oriented time have had a positive effect on the motivation for career path. Causing the motivation for career path for the general high school students who lack their self-motivation for their career with a goal of only advancing to college will help the actions for the career path preparations, which will help not only their college life but also deciding their own career path. Hence, through this study, it may be assumed that perspective of future oriented time is a variable which directly influences the actions for the career path preparations, and at the same time, influences the self leadership and motivation for the career path, while indirectly influencing the actions for the career path preparations[8]. Furthermore, based on the previous studies which claimed that the level of self-leadership varies by gender, and that the motivation for career path and actions



for the career path preparations also vary[10], this study seeks to investigate and learn as to whether the structural relationships vary by gender through the multi-group analysis.

## **2. Theoretical Background**

### **2.1. Perspective of future oriented time, actions for the career path preparations, self leadership, and motivation for career path**

Time perspective develops just as an individual grows, and also has a time perspective as a value or a behavior acquired through the parental upbringing and cultural background and the norms to which one belongs. Furthermore, time perspective is a perspective of examining the psychological condition of the past and future, and is also a system of the time structure which identifies the future or has experiences of the past. Zimbardo and Boyd(1999)[11] claimed that time perspective is a process through which the integration of an individual's experience and social experience in a given time take place unconsciously, and also helps to impute rules and meanings to the experiences we have had. In addition, through encoding, storing, and recalling the events we have experienced, they cause us to form the expectations and make connections to realize our goals. They developed a scale(Zimbardo Time Perspective Inventory; ZTPI) to measure the time orientation, and classified the time perspective into the five categories. First, a negative time perspective of the past is about having a pessimistic, aversive, and negative attitude towards one's past. Second, a positive time perspective of the past is about feeling the past events in a gentle, emotional, and nostalgic manner. Third, the present hedonistic time perspective is oriented towards the present pleasure and does not sacrifice today for tomorrow.

Fourth, it has been accepted and regarded that the present fateful time perspective cannot control one's life, and that everything is determined by fate. Fifth, the perspective of future oriented time is far more interested in the future goals than those of the present, and is also interested in what results the present activities will bring in the future. In this study, the perspective of future oriented time among the five components of time was explored and studied. The perspective of future oriented time is the act of focusing an individual's activities and scope of thinking on an important point in the future[4], and the perspective of future oriented time regulates behavior, sets the goals, and synchronizes and reflects on the performance of other tasks, and evaluates as to whether the goal is achieved[12].

The actions for the career path preparations include not only the cognitive and attitude aspects including the intellectual ability, aptitude, personality, interest, and career decision level, but also the rational and practical actions, actions to execute appropriate career decisions, and the actions to practice after career decision making, among other actions[2]. The actions for the career path preparations were defined as the behaviors of self-discovery for the career direction related exploration, and information gathering, test and interview preparation for the direct job preparation behaviors[13]. It was also defined as a practical effort to achieve such goals as purchasing tools and investing time and effort in the process of preparing for an occupation.

The details of the early career education had the tendency to stress on the cognitive and attitude aspects rather than the practical and behavioral aspects[2]. Accordingly, claimed that, even if the attitude towards and the perception of career are mature, any successful career goals cannot be achieved if the career preparatory process is not rational and efficient[14], and that appropriate career related decision making must be followed by action. It was also claimed that, the harmony of the three factors of cognition, emotion, and behavior is crucial for the field of career, and in particular, the behavioral aspect ought to be given a priority in order to actively engage in the career path related activities. This means that the students ought to be actively engaged in their career path related activities since our society demands 'what they have' rather than 'what they desire to do'[15]. In this respect, career counseling and career education in high school must be shifted toward improving not only the cognitive and emotional but also the actions for the career path preparations[16].

Self leadership is claimed to be thinking and behavioral strategies used to influence one's own by Manz and Sims(1989)[17]. It is based on the social cognitive theory and the intrinsic motivation theory, and also presents behavioral strategies from the social cognitive theory and cognitive strategies from the intrinsic motivation theory. First, they explain that the behavior centric strategies can be organized and practiced as for the method of self-management via "modeling." That is, it suppresses negative and undesirable behaviors which cause failures [18], and reinforces successful behaviors[19]. The behavioral strategies intended to improve self-awareness for doing the things one does not desire to do but must do, are consisted of self-goal setting, cue management, self-observation, self-reward, self-reflection, and practice, respectively. Second, it is claimed that as for the cognitive strategies, doing a favorite activity or performing a task yields an intrinsic reward of "pleasure," and it is also important to motivate one's self. Such cognitive strategies are further classified into natural rewards and constructive thinking strategies[17].

Studies on self-leadership have been carried out targeting various classes across various fields including education, psychology, and business administration. Both the behavioral and cognitive strategies of self-leadership of the general high school girls turned out to be highly correlated with the actions for the career path preparations. Furthermore, the high school students' self-leadership and actions for the career path preparations demonstrated a positive correlation, and in particular, it was claimed that there is a difference in the actions for the career path preparations by gender, grade, leader experience, and leadership education related experiences. Motivation is the process of generating and maintaining behaviors towards a certain goal, while determining the direction, level, and the intensity of the relevant behaviors. The motivation for career path refers to the 'career related' motivation, and is also a sub-concept of motivation. The motivation for career path is the ability to make rational and flexible career decisions based on an understanding of one's interests, aptitudes, values, and personality and specific knowledge about the occupation, which may be deemed to be influential upon the behavioral, cognitive, and affective aspects[8]. London(1983) defined the motivation for career path as one which exercises an individual's career identity, insight into factors influencing career, and flexibility to influence career goals and the career related decision-making behaviors[20].

London(1983) classified the motivation for career path into the three factors of career identity, career insight, and career resilience, respectively[20]. Career identity refers to the direction of motivation, career insight refers to facilitation, and career resilience refers to continuity[21].

People with a high level of motivation for career path seek to maintain a positive attitude towards the future by recognizing and developing problems in their career[22]. In particular, it was claimed that the career development related activities are continuously needed for all people, regardless of age, at a time when the environment requires the constant expansion of knowledge and capabilities[20].

It was claimed that the motivation for career path brings a great influence on the continuous learning activities for the career development. The evolving society requires efforts to improve various skills and adaptability for the career development, and continuous learning may be among the way towards that end[23].

## **2.2. Inter variable relationship**

Preparing for a career path is related to the perspective of future oriented time in the sense of practicing the present action, mindful of the future.

High school period is a time to rationally plan a career path, and prepare for the occupational future through consideration and reflection. However, there are students who think on their own and come up with a rational career plan through a process of reflection, while there are many other students who do not do so. Hence, the students with the perspective of future oriented time are expected to regulate and control their current behaviors to achieve their future goals, and perform various preparatory activities[24].

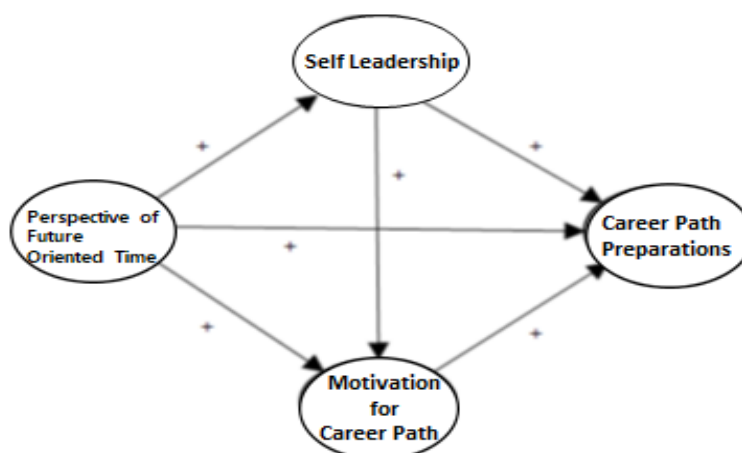
Examining the previous studies on the perspective of future oriented time and the actions for the career path preparations, it was claimed that the perspective of future oriented time and actions for the career path preparations of high school students demonstrate a positive correlation for the time perspective study, and the perspective of future oriented time partially mediate a life-oriented goal, achievement-oriented goal, and a goal instability and has a significant positive correlation on the actions for the career path preparations[25].

As such, there are a few studies which directly deal with the relationship between the perspective of future oriented time and the actions for the career path preparations in Korea. However, since the perspective of future oriented time is concerned with what value current actions have in achieving future goals, and how the present and future are interconnected, it may be predicted that the perspective of future oriented time will influence the actions for the career path preparations.

Studies on self-leadership have been carried out targeting various classes across various fields including education, psychology, and business administration. Both the behavioral and cognitive strategies of self-leadership of high school girls turned out to be highly correlated with the actions for the career path preparations. Furthermore, the high school students' self-leadership and actions for the career path preparations turned out to have a positive correlation, and in particular, it was claimed that there was a difference in the actions for the career path preparations by gender, grade, leader experience, and leadership education related experiences.

It was also claimed that the self-leadership of college students influences the motivation for career path, and Jongwon Lee(2014)[8] claimed that the self-leadership of college students has a positively(+) direct influence on the motivation for career path. Many studies on the perspective of future oriented time have been conducted in connection with learning, yet recently, those related to career have been reported. Among which, the perspective of future oriented time and the motivation for career path were claimed to have a positive effect [20]. In the study of the Effect of College Students' Time Perspective on the Motivation for Career Path, the perspective of future oriented time, which is a sub-factor of the time perspective, had a positive relationship with the motivation for career path[23]. Hence, this study seeks to examine and understand whether self-leadership and the motivation for career path play their role as mediating variables in the process where the perspective of future oriented time influences the actions for the career path preparations of the high school students.

**Figure 1.** Research model.



### 3. Research Method

#### 3.1. Research subject and the data collection

In this study, male and female students attending high schools in Gyeongbuk, Daegu, Ulsan, and Gyeongnam regions were provided with guidance on the survey questionnaire via their homeroom teacher and Wee Class counselor, and a survey was conducted. A total of 650 questionnaires were distributed, and 598 questionnaires were collected. Among the questionnaires collected, 565 copies were used for the final analysis, excluding the 33 copies of data which did not mark at least one question or repeatedly marked the same number, among the insincere responses made.

#### 3.2. Measuring tool

##### 3.2.1. Perspective of future oriented time

The scale for the perspective of future oriented time developed by Husman and Shell(2008)[26] was adapted by Hwayoung Choi, and the scale was used by Aekyung Yim(2017)[27] for the high school students. This scale is consisted of the two sub-factors of future value and instrumentality, and is also consisted of a total of 19 questions, respectively. Examining the coefficient of the internal consistency of each sub-factor forming the perspective of future oriented time, value turned out to be slightly low at .58, yet continuity turned out to be high at .85. The internal consistency coefficient(Cronbach's  $\alpha$ ) of the overall scale turned out to be .83, demonstrating a high level of reliability.

**Table 1.** Results of reliability analysis of the measuring tool for the perspective of future oriented time.

Sub-factor	Question #	No. of questions	Internal consistency
Value	1, 2*, 3, 4, 5, 6, 7	7	.58
Instrumentality	8*, 9, 10*, 11*, 12, 13*, 14*, 15*, 16*, 17, 18, 19*	12	.85
Total		19	.83

Note: \*Reverse scored question.

##### 3.2.2. Actions for the career path preparations

To measure the level of the high school students' actions for the career path preparations, the test for the actions for the career path preparations made by Wanseong Park(2003)[28] was used. The actions for the career path preparations scale is consisted of 22 questions for a total of 22 questions including 5 questions for the career and major department decision making, 5 questions for occupational experience related activities, 10 questions for the information gathering activities, and 4 sub-factors of 2 questions for job preparation related activities, respectively. Considering the fact that they are 3 general high school students, the number of questions is 3 questions excluding 2 related to job preparation and 20 questions of sub-factors. The internal consistency coefficient(Cronbach's  $\alpha$ ) turned out to be .91, demonstrating a high level of reliability. In addition, the internal coherence coefficient of each sub-factor turned out to be .81-.85, respectively.

**Table 2.** Results of reliability analysis of the measuring tool for the level of actions for the career path preparations.

Sub-factor	Question #	No. of questions	Internal consistency
Major department decision making	1,2,4,9,11	5	.81
Occupational experience	3,6,7,8,13	5	.82

Information collection	5,10,12,14,15,16,17,18,19,20	10	.85
Total		20	.91

### 3.2.3. Self leadership

The Revised Self-Leadership Questionnaire(RSLQ) scale developed by Houghton and Neck(2002) was used as a scale validated in Korea by Yongguk Shin, Youngseok Han, and Myeongso Kim(2009)[29]. The responses were made on a Likert 5-point scale, and was consisted of 35 questions of 3 sub-factors of 18 questions of action centric strategy, 5 questions of natural reward strategy, and 12 questions of constructive thinking strategy, respectively. The internal consistency coefficient(Cronbach's  $\alpha$ ) turned out to be .92, demonstrating a high level of reliability. The internal consistency coefficient of each sub-factor forming self leadership turned out to be .69-.89, respectively.

**Table 4.** Results of reliability analysis of the measuring tool for the level of actions for self leadership.

Sub-factor	Question #	No. of questions	Internal consistency
Action centric	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	18	.87
Natural reward	19, 20, 21, 22, 23	5	.69
Constructive thinking	24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35	12	.89
Total		35	.92

### 3.2.4. Motivation for career path

The research tool developed directly by Bogyeong Kim(2012) was used to measure the level of the motivation for career path of college students. Respondents were made on a Likert 5-point scale, and 16 questions of three sub-factors of 5 questions for career identity, 6 questions for career insight, and 5 questions for career resilience were used, respectively. The internal product consistency coefficient(Cronbach's  $\alpha$ ) of this tool turned out to be .91, demonstrating a high level of reliability. The internal consistency coefficient of each sub-factor forming the motivation for career path turned out to be .75-.90, respectively.

**Table 5.** Results of reliability analysis of the measuring tool for the level of actions for the motivation for career path.

Sub-factor	Question #	No. of questions	Internal consistency
Career path identity	1, 2, 3, 4, 5	5	.90
Career path insight	6, 7, 8, 9, 10, 11	6	.84
Career path resilience	12, 13, 14, 15, 16	5	.75
Total		16	.91



## 4. Results

### 4.1. Validation of the research model

As it is apparent in <Table 6>, the conformity index of the revised research model is  $\chi^2=135.60$ ,  $df=34$ ,  $GFI=.93$ ,  $NFI=.91$ ,  $CFI=.92$ ,  $SRMR=.04$ , and hence, the research model turned out to be conforming to explain the research data. The conformity of the research model established by the researcher is conforming for predicting the causal relationship between the variables.

**Table 6.** Level of the model conformity of the research model.

Conformity index	$\chi^2$	$df$	<i>GFI</i>	<i>NFI</i>	<i>CFI</i>	<i>SRMR</i>
Research model	276.07	38	.91	.89	.90	.06
Revision model	135.60	34	.93	.91	.92	.04

### 4.2. Path coefficient of the research model

The conformity of the research model was confirmed to be appropriate, and it was validated that the structural model conformed to the sample of this study, and the structural model path coefficients of the research model were analyzed. The analytical results are presented in <Table 7>. As a result of the path coefficient analysis performed, in the case of the perspective of future oriented time → self leadership, self leadership → motivation for career path, motivation for career path → actions for the career path preparations, they were statistically significant at the level of significance  $p < .001$ , and in the case of the perspective of future oriented time → motivation for career path, it turned out to be statistically significant at the level of  $p < .01$ , respectively.

**Table 7.** Path coefficients of the research model.

Classification	Non-standardized coefficient	Standardized coefficient	<i>S.E</i>	<i>C.R</i>	<i>P</i>
Perspective of future oriented time → self leadership	1.18	.64	.17	7.00	***
Self leadership → motivation for career path	.12	.51	.02	6.14	***
Perspective of future oriented time → motivation for career path	.07	.17	.04	1.97	*
Self leadership → actions for the career path prepara-	.03	.11	.02	1.56	.12
Motivation for career path → actions for the career path prepara-	.98	.75	.10	10.00	***
perspective of future oriented time → actions for the career path prepara-	-.04	-.07	.04	-.90	.37

Note: \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

### 4.3. Validation of the mediating effect

The indirect effect of the perspective of future oriented time on the actions for the career path preparations is consisted of the combination of the indirect effect via self leadership, indirect effect via the motivation for career path, and the indirect effect via self leadership and the motivation for career path. The results of the statistical significance analysis performed via bootstrapping by using phantom variables are as illustrated in <Table 8> below.

**Table 8.** Results of the indirect effect analysis between variables via the effect decomposition.

Classification	Direct effect			Indirect effect			Total effect		
	Non-standardized coefficient(B)	Standardized coefficient( $\beta$ )	C. R	Non-standardized coefficient(B)	Standardized coefficient( $\beta$ )	Bootstrap estimated p-value	Non-standardized coefficient(B)	Standardized coefficient( $\beta$ )	Bootstrap estimated p-value
Perspective of future oriented time →motivation for career path →actions for the career path preparations	-	-	-	.63	.45	.00**	-	-	-
Perspective of future oriented time →self leadership →motivation for career path →actions for the career path preparations	-	-	-	.58	.38	.01**	-	-	-

Note:Bootstrap confidence level : 95%; number of bootstrap samples : 500, \*\*p<.01.

### 4.4. Multi-group analysis

To verify as to whether the structural relationship of variables varies between male and female students, the multi-group analysis was conducted for examination. In order to examine as to whether there is a significant difference in the path coefficients between the two groups, the structural identity model with equivalence constraints applied to each of the six path coefficients in the model was compared with the measurement identity model without any constraints. As illustrated in <Table 9>,

significant differences were discovered for both men and women in the paths of the perspective of future oriented time → self leadership, self leadership → motivation for career path, and motivation for career path → actions for the career path preparations, respectively. Examining the standardization coefficient, they were  $\beta=.62(p<.001)$  for male students and  $\beta=.63(p<.001)$  for female students in the path of the perspective of future oriented time → self leadership, respectively. That is, it is apparent that the perspective of future oriented time has a greater influence on self-leadership among the female students than among the male students.

In the path running from self leadership → motivation for career path, it was  $\beta=.52(p<.001)$  for male students, and  $\beta=.45(p<.001)$  for female students. This explains that the male students' self-leadership has a greater influence on the motivation for career path than for the female students. In the path running from motivation for career path → actions for the career path preparations, it was  $\beta=.67(p<.001)$  for male students, and  $\beta=.71(p<.001)$  for female students. This result suggests that the motivation for career path has a greater influence on the actions for the career path preparations for female students than for the male students. However, the path of self leadership → motivation for career path was significant only for the male students at the .05 level, and in the path of the perspective of future oriented time → actions for the career path preparations, the path of the perspective of future oriented time → motivation for career path was not significant for both male and female students.

**Table 9.** Validation of the path differences between male and female groups.

Parameter	Men			Women			$\chi^2$ Amount of change	TLI Amount of change
	<i>B</i>	$\beta$	<i>p</i>	<i>B</i>	$\beta$	<i>p</i>		
Perspective of future oriented time →self leadership	1.09	.62	***	1.05	.63	***	.88	-.01
Perspective of future oriented time →actions for the career path preparations	-.11	-.23	.06	-.07	-.14	.25	.76	-.01
Perspective of future oriented time →motivation for career path	.11	.23	.06	.06	.13	.31	.87	-.01
Self leadership →actions for the career path preparations	.06	.23	.03	.06	.09	.11	.62	-.00
Self leadership →motivation for career path	.15	.52	***	.11	.45	***	1.66	-.01
Motivation for career path →actions for the career path preparations	.63	.67	***	.85	.71	***	.12	-.01

Note: \* $p<.05$ , \*\* $p<.01$ , \*\*\* $p<.001$ .

## 5. Conclusion and Discussion

This study has examined the influence of the perspective of future oriented time on the actions for the career path preparations, targeting 565 male and female high school students attending high schools in Gyeongbuk, Daegu, Gyeongnam, and Ulsan regions, and in which process, examined what mediating effect is brought about by self leadership and the motivation for career path. Furthermore, the study has examined as to whether the structural relationship of the variables varies by gender. The research results of this study are as follows.

As a result of the correlation analysis performed to examine the relevance of each variable, there was a significant correlation among all of the variables.

First, the perspective of future oriented time turned out to be most related to self leadership, followed by the motivation for career path and the actions for the career path preparations, respectively. Such results are consistent with the result where the perspective of future oriented time, which is a sub-variable of time, demonstrates a significant positive correlation with the actions for the career path preparations in a study on the relationship between the high school students' time perspective and the actions for the career path preparations. Furthermore, it is consistent with the research result that, in a study on the relationship between the college students' time perspective and their motivation for career path, the perspective of future oriented time, which is a sub-variable of time, demonstrated a significant positive correlation with the motivation for career path.

Second, the structural model was validated to analyze the relationship between the perspective of future oriented time and self leadership, motivation for career path, and the actions for the career path preparations. In the initial research model, the conformity of the perspective of future oriented time, actions for the career path preparations, and self leadership and the actions for the career path preparations did not satisfy the criteria. Accordingly, the revised model in which the error was corrected in consideration of the MI index was selected as the final model. As a result of the statistical validation, the perspective of future oriented time of high school students did not directly influence the actions for the career path preparations, but has had an indirect influence via self leadership and the motivation for career path.

One path which indirectly influences the actions for the career path preparations through the perspective of future oriented time precedes self-leadership through the motivation for career path, and another which indirectly influences the actions for the career path preparations through the motivation for career path by the perspective of future oriented time emerged. The above research results are inconsistent with the previous research results that the perspective of future oriented time has a direct influence on the actions for the career path preparations, and furthermore, are inconsistent with the existing research results[30] that the higher the level of self-leadership, the higher the level of actions for the career path preparations.

What is interesting when examining the research results is that, the motivation for career path in both paths plays a common mediating role. Here, the current educational reality in Korea may be examined. Third, it may be inferred that the Korean high school students rarely invest their time in their career path or engage in career related activities due to the excessively college admission oriented social climate[18].

Fourth, as a result of the multi-group analysis performed to validate the gender difference of the structural relationships, there were differences according to the male and female students. First, in the path of perspective of future oriented time having influence on self leadership, female students were more influenced than the male students. This implies that female students are better than male students in their ability to control, regulate and motivate themselves when they place their value on the future and perceive that their future goals and present actions are interconnected. This is consistent with the study of Zimbardo and Boyd(1999)[11] that women are more forward looking than men, and that women are more optimistic about their future than men.

The results of this study confirmed the influence of the perspective of future oriented time on the actions for the career path preparations, and materialized the mediating effects of self-leadership and the motivation for career path in the process. In order to elevate the level of the actions for the career path preparations of general high school students, it is important to not only emphasize the future

goal, but properly guide them on the skills needed to achieve the goal, pay attention to themselves, and have and practice the motivation for career path.

This suggests that the perspective of future oriented time, self leadership, and the motivation for career path are important variables to consider when developing and applying various activities for promoting the actions for the career path preparations in school. The limitations and recommendations of this study are as follows.

First, the study subjects are limited to Yeongnam region of Gyeongbuk, Daegu, Ulsan, and Gyeongnam, and hence, there may be limitations in generalizing them as a whole. In the future research, sampling from across various regions as well as Yeongnam region is needed.

Second, in this study, the direct influence between the perspective of future oriented time, actions for the career path preparations, and self leadership and the actions for the career path preparations could not be examined. While this result demonstrates the current situation of the high school students whose goal is to advance to college, there is still a lack of previous studies, and hence, follow-up studies are needed.

Third, it was discovered and learned that it is necessary to increase the level of the motivation for career path in order for the high school students to perform well in their actions for the career path preparations. In the follow-up studies, it would be necessary to discover various variables to increase the level of the actions for the career path preparations.

## 6. References

### 6.1. Journal articles

- [1] Cho H. The Effect of Learned Helplessness on the Adaptation to College Life. *Regulations*, 6(2), 10-15 (2021). [\[Article\]](#)
- [3] Lee JC & Hong AJ. The Effect of Self Leadership on Career Preparation Behavior of College Students: Mediating Effect of Career Decision Self-efficacy and Employment Possibility. *Studies In Career Education*, 26(1), 69-92 (2013).
- [4] Walker TL & Tracey TJG. The Role of Future Timeperspective in Career Decision-making. *Journal of Vocational Behavior*, 81, 150-158 (2012).
- [5] Manz CC. Self-leadership: Toward an Expanded Theory of Self-influence Processes in Organizations. *Academy of Management Review*, 11(3), 585-600 (1986).
- [6] Kim GH & Kim JH. The Trend of Self Leadership Research. *The Korean Leadership Review*, 6(1), 77-98 (2014).
- [7] London M. Toward a Theory of Career Motivation. *Academy of Management Review*, 8, 620-630 (1983).
- [8] Lee JW & Choi ES. The Structural Relationship between Self Leadership, Social Support, Career Motivation, Career Decision Self-efficacy. *International Journal of Adult & Continuing Education*, 18(1), 33-54 (2015).
- [9] Park YI & Ha J. The Mediating Effect of Career Motivation in Relation of Family Support and Career Preparation Behavior. *Youth Facility Environment*, 17(3), 81-91 (2019).
- [10] Shin HJ. A Potential Profile Analysis on Career Stress and Career Preparatory Behavior of University Students and Verification of the Influence of Career Motivation. *The Korean Journal of School Psychology*, 13(2), 349-373 (2016).
- [11] Zimbardo G & Boyd N. Putting Time in Perspective: A Valid, Reliable Individual Difference Metric. *Journal of Personality and Social Psychology*, 77(6), 1271-1288 (1999).
- [12] Husman & Shell. Beliefs and Perceptions about the Future: A Measurement of Future Time Perspective. *Learning and Individual Differences*, 18(2), 166-175 (2008).
- [13] Kim KH & Cho YA. A Study on the Relationship between Mock Learning Involvement Perceived by Middle School Students. *Journal of the Korean Institute of Industrial Technology*, 18(1), 269-281 (2017).



- [14] Choi KB. A Study on Stress, Self-esteem and Resilience for Korean Nursing Students' Safety Management. *International Journal of Crisis & Safety*, 4(1), 8-18 (2019). [\[Article\]](#)
- [15] Jang HJ. The Influence of Personal, Family, School Students. *Studies In Career Education*, 32(3), 43-64 (2019).
- [16] Cho SS & Jeu SJ. The Effects of Career Education Group Program on Career Preparation Behavior of High School. *Studies In Career Education*, 23(3), 47-64 (2010).
- [18] Bae JY & Kim YJ. Youth Mental Health Crisis and Countermeasure in Korean. *International Journal of Human & Disaster*, 1(1), 13-18 (2016). [\[Article\]](#)
- [19] Neck CP & Houghton JD. Two Decades of Self-leadership Theory and Research. *Journal of Managerial Psychology*, 21(4), 270-295 (2006).
- [20] London M. Toward a Theory of Career Motivation. *Academy of Management Review*, 8, 620-630 (1983).
- [21] Noe RA & Noe AW & Bachhuber JA. An Investigation of the Correlates of Career Motivation. *Journal of Vocational Behavior*, 37(3), 340-356 (1990).
- [22] London M & Noe RA. London's Career Motivation Theory: An Update on Measurement and Research. *Journal of Career Assessment*, 5(1), 61-80 (1997).
- [23] Kang HJ & Kang SH & Lim EM. A Study on the Possibility of Group Classification based on Academic Motivation and Career Motivation of General High School Students. *Asian Journal of Education*, 17(2), 151-175 (2016).
- [24] Kang C. The Impact of Collective Art Therapy on the Learned Lethargy. *Regulations*, 6(3), 10-18 (2021). [\[Article\]](#)
- [25] Kim BJ. Time and Happiness. *The Korean Journal of Social and Personality Psychology*, 28(1), 49-67 (2014).
- [26] Husman J & Shell DF. Beliefs and Perceptions about the future: A Measurement of Future Time Perspective. *Learning And Individual Differences*, 18(2), 166-175 (2008).
- [27] Ahn JY & Yoo SH & Shin CY & Lim AK. The Relationship between Future-oriented Time Perspective and Career Adaptability of High School Students. *Korean Journal of Youth Studies*, 24(3), 83-104(2017).
- [28] Park WS. Development and Validation of Career Preparation Behavior Test for High School Students. *The Korean Journal of Educational Methodology Studies*, 15(2), 121-143 (2003).
- [29] Shin YG & Kim MS & Han YS. A Study on the Validation of the Self Leadership Scale. *The Korean Journal of School Psychology*, 6(3), 313-340 (2009).
- [30] Yang SJ & Song YS. The Effect of Self leadership Level on Career Preparation Behavior of College Students. *Research on Youth Studies*, 22(12), 443-470 (2015).

## 6.2. Books

- [2] Kim BH & Kang EH & Kang K & Hwang MH. Career Counseling. Hakjisa (2013).
- [17] Manz CC & Sims HP. Superleadership: Leading Others to Lead Themselves. Prentice Hall (1989).

## 7. Appendix

### 7.1. Authors contribution

	Initial name	Contribution
Lead Author	CK	-Set of concepts <input checked="" type="checkbox"/>
		-Design <input checked="" type="checkbox"/>
		-Getting results <input checked="" type="checkbox"/>
		-Analysis <input checked="" type="checkbox"/>
		-Make a significant contribution to collection <input checked="" type="checkbox"/>
		-Final approval of the paper <input checked="" type="checkbox"/>
Corresponding Author*	HC	-Corresponding <input checked="" type="checkbox"/>
		-Play a decisive role in modification <input checked="" type="checkbox"/>
		-Significant contributions to concepts, designs, practices, analysis and interpretation of data <input checked="" type="checkbox"/>
		-Participants in Drafting and Revising Papers <input checked="" type="checkbox"/>
		-Someone who can explain all aspects of the paper <input checked="" type="checkbox"/>

## Public Value

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### Effect of Gamification on Learner's Class Participation Motivation and PUBLIC VALUE

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#### Abstract

**Purpose:** The researcher tried to give fun and interest to class activities for learners who are familiar with the game environment. And I tried to actively utilize Gamification, which can help achieve educationally meaningful goals, in class education. A lot of research is needed so that learners can learn the learning elements that feel boring and difficult by applying the gamification element to education more fun and easily by themselves. So, The researcher applied edutech tools related to gamification to the beauty curriculum, and studied the effect of gamification on class participation motivation.

**Method:** During the beauty and health class in the first semester of 2021, The researcher conducted an interactive class using a quiz-type gamification edutech tool such as Kahoot in subjects like wedding makeup, beauty hygiene laws, total coordination, and beauty English etc. In the 15th week of the final exam period, The researcher used a Google questionnaire to investigate the students' responses to class activities during the first semester. In the first semester of 2021, The researcher conducted a survey of 100 people in the 1st–4th grades of the Department of Beauty and Health as research subjects.

**Results:** More than 90% of the students who participated in the survey were women, and 88.5% of students in their 20s were surveyed. As a result of the survey, it was found that the students' concentration aspect, learning experience, learning goal achievement, and lecture satisfaction were somewhat higher in the game class activities using the gamification tool. Most of the students responded positively to using gamification tools in class.

**Conclusion:** There were also opinions that the accessibility of the gamification app was somewhat difficult and difficult for students who experienced it for the first time. During subject orientation, and when students experience difficulties from time to time, prior guidance and steady guidance on how to approach the gamification app should be combined. In a future study, The researcher would like to study more deeply in which parts of the gamification tool the students are most interested in.

**[Keywords]** Gamification, Motivation, Learning, Edutech, Beauty

## 1. Introduction

In the 21st century, innovative educators have argued that education needs to be transformed after the 4th industrial revolution[1][2]. There have been major changes in society, economy, and culture since Covid 19, and the biggest change among them has been an innovative turning point in education[3]. Almost all educators around the world have experienced face-to-face and online classes due to COVID-19. Therefore, the paradigm of education has changed to an environment that can no longer retreat. Now, we need a communication education model for developing creative convergence talents that the future era of artificial intelligence wants [4]. The ability of teaching and learning methods using digital technologies to transform future education is essential for both instructors and learners[5].

Gamification means to induce active participation, immersion, and enjoyment of learners by applying game-like thinking and game mechanics[6]. Current learners of the game generation have the ability to process information quickly. They also have a variety of characteristics that favor graphics over text[7]. Therefore, educators must apply new learning principles and methods to their learning that are appropriate to their cognitive styles and cultures[8].

An analysis of the UK and France, where they have a high level of immersion in class, shows that the UK gives challenging and curious learning tasks, and in the case of France, learning activities that arouse motivation and curiosity are mainly carried out[9]. A lot of research is needed so that learners can learn the learning elements that feel boring and difficult by applying the Gamification element to education more fun and easily by themselves.

In this study, Gamification, which can help learners who are familiar with the game environment, achieve educationally meaningful goals through fun and interest as a medium, was actively used in education. The purpose of this researcher was to study the effect of applying Gamification edutech tools to the beauty subject on the motivation to participate in the class.

## **2. Gamification and Learner's Motivation to Participate in Class**

### **2.1. Gamification**

The Korean game industry is not only a digital entertainment industry, but also an important culture of modern people. As a way to maximize the positive effects of games and reduce the negative effects, educational game contents for the general public have been developed[10]. Gamification grafts mechanics used in games to non-game areas[11][12]. McGonigal(2011) argues that games can make a better world and a better school than today, and that in a rigid and passive school classroom environment, students can easily get bored and have difficulty concentrating[13]. In the study of Ham Young-ju(2021), a curriculum design model and a content development model for developing Christian educational content in a block-type coding method based on gamification were presented, and educational content usable for Christian education was produced[14]. Kyung-eun Lee and Dong-ryeon Jang(2021) focused on the MZ generation and conducted a participatory blended gamification study for the metaverse environment, focusing on global brand cases[15]. In a study using a game app-based smart tool, a learning method that organically connects to each other was considered by classifying it into three stages: pre-learning activity before class, learning activity in class, and review activity after class[16]. In the study of English grammar learning, there was a significant difference by conducting pre- and post-test classes using Kahoot and Socrative app[17]. Kahoot! produces marked students' engagement and satisfaction in formative assessments enabling it to be applied live for any learning session either face to face or virtual for distance learning[18].

In a study on the application effect of game-based student response system(GSRS) in nursing major education, the effectiveness of learning immersion was verified[19]. In another study on nursing education, a game-based class using Kahoot was applied, and the effect on learning immersion, critical thinking disposition, and problem-solving ability was confirmed[20].

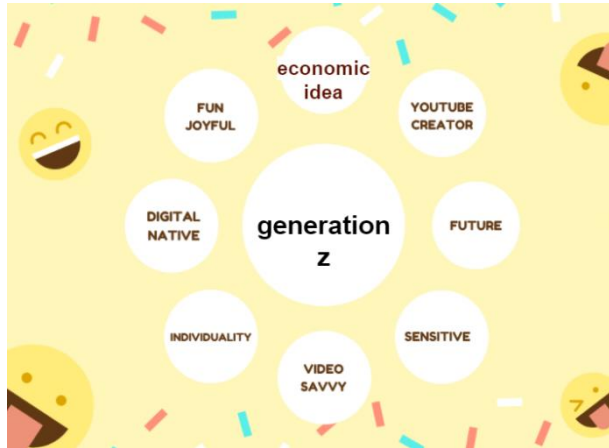
Games should be actively used in class to increase students' motivation to learn, induce fun and interest in class, and bring vitality to the classroom.

### **2.2. Motivation of learners to participate in class**

In the 21st century, essential elements for successful acquisition of knowledge and skills are creativity and innovation, communication and collaboration, research and information fluency, critical thinking, problem-solving ability, decision-making ability, digital citizenship, engineering operations and concepts, etc.[21]. In order to develop these core competencies and abilities of students, it is necessary to first understand their tendencies. Looking at the characteristics of the recent Z generation, students of the Z generation have digital native characteristics as they

are exposed to digital media such as mobile as soon as they are born[22][23]. They are sensual, individualistic, and like to have fun. The following figure shows the characteristics of Generation Z well<Figure 1>.

**Figure 1.** Characteristics of Generation Z.



The following is a look at the previous studies on learning immersion and class participation in classes to which gamification is applied. Kim Young-eun and Kim Jeong-eun(2021) found that gamification had a positive effect on the learning motivation and learning immersion of pre-primary early childhood teachers in their study[24]. In a study analyzing the learning effect of classes to which gamification was applied, it was found that in classes to which gamification factors were applied, students had a high learning immersion attitude and actively expressed their opinions[25]. Joo-Young Chung and Mi-Hwa Lee conducted a study on learning immersion and class participation in a class to which gamification was applied. The gamified class showed significant results in all sub-factors of learning immersion and class participation [26].

### 3. Research Method

This researcher conducted an interactive class using a quiz-type gamification edutech tool such as Kahoot in the subjects of wedding makeup, beauty hygiene laws, total coordination, and beauty English during the class of the Department of Beauty and Health in the first semester of 2021[27]. The gamification tool was used not only during class, but also as a tool for flipped learning or as a tool for after-school assignments, midterm and final exams[28]. In the 15th week of the final exam period, a Google questionnaire was used to investigate the students' class activities during the first semester. The questionnaire was made with reference to previous research[29]. In the first semester of 2021, we conducted a survey of 121 students from the first year to the fourth year of the Department of Beauty and Health. Duplicate or careless responses to the survey were deleted and 97 data were used as the results.

#### 3.1. Require learner participation

First of all, it was important to understand the propensity of students for learner analysis. As this is a study to motivate class participants, the ASSURE Model was referred to[30]. According to the learning goals, the media methods and materials that can turn the content into a game were selected. According to the weekly gamified evaluation method, students' understanding was observed, and any problems were identified, and methods that could be corrected in the next semester were sought.



Figure 2. ASSURE model.

# ASSURE Model

- **A**nalyze Learners
- **S**tate Objectives
- **S**elect Methods, Media, and Materials
- **U**tilize Media and Materials
- **R**equire learner Participation
- **E**valuate and Revise

## 3.1.1. Select methods, media and materials

Three research methods were conducted. The first was a way to increase students' synchronization and immersion by making a quiz on the flipped learning video, the second way to make and use a quiz for in-class activities, and the third way to make a quiz game for class assignments or evaluation. As game tools, Kahoot, Edpuzzle, and Slido were mainly used.

## 3.2. A survey on the effect of gamification on user motivation to engage in class

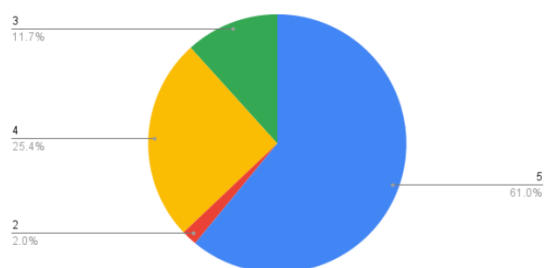
The survey was divided into sections such as demographic variables, experiences in terms of concentration, learning experiences, difficult experiences with access to gamification app, experiences of achievement of learning goals of gamification app, and lecture satisfaction.

## 4. Research Results

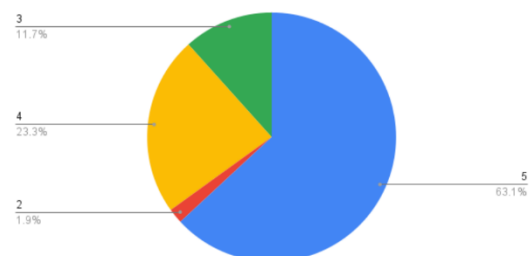
### 4.1. Experience of concentration

86.4% of the students answered yes to the question “I really focus on class-related content when I play games using various quiz tools such as Kahoot, Edpuzzle, and Slido”. In the question “Learning activities using edutech tools to solve quizzes such as Kahoot, Edpuzzle, and Slido helped me to participate happily in class”, 86.5% of students answered said I agree. As shown in the following <Table 1>.

Table 1. Experience of concentration.



Degree of concentration during game class activities



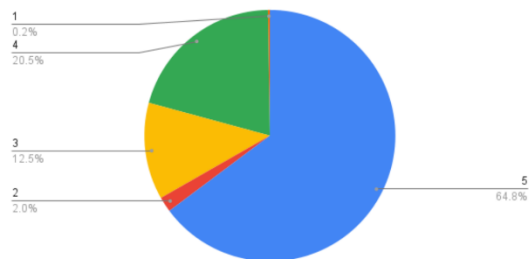
Degree of enjoyment

Note: 5 strongly agree, 4 agree, 3 neutral, 2 disagree, 1 strongly disagree.

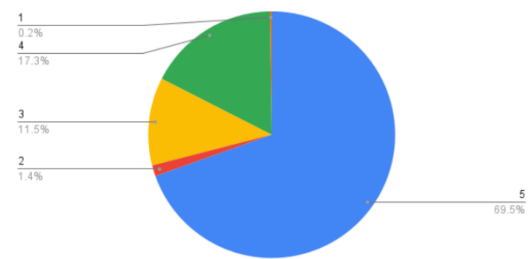
## 4.2. Learning experience

In the question “I think class-related knowledge is increasing in learning activities that are solved through quizzes such as Kahoot, Edpuzzle, and Slide”, 85.3% of students answered that they agreed. In addition, 86.8% of students answered that they agreed with the question, “Classes that solve class-related contents with quizzes such as Kahoot, Edpuzzle, and Slide are helpful for learning.” As shown in the following <Table 2>.

**Table 2.** Learning experience.



The degree to which you think your class-related knowledge is increasing



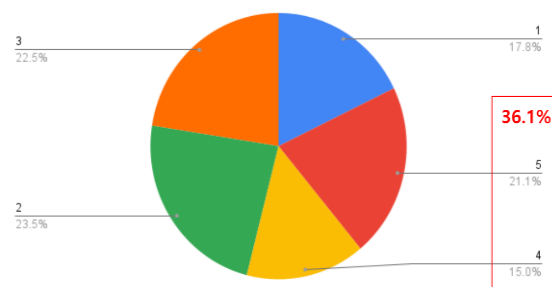
The degree to which a game class thinks it is helpful for learning

Note: 5 strongly agree, 4 agree, 3 neutral, 2 disagree, 1 strongly disagree.

## 4.3. Experience of how difficult it is to access the app

In the question “It was very difficult to use edutech tool apps that solve quizzes such as Kahoot, Edpuzzle, and Slido in class,” 36.1% of students answered that they agreed. As shown in the following <Table 3>.

**Table 3.** Experience of how difficult it is to access the app.



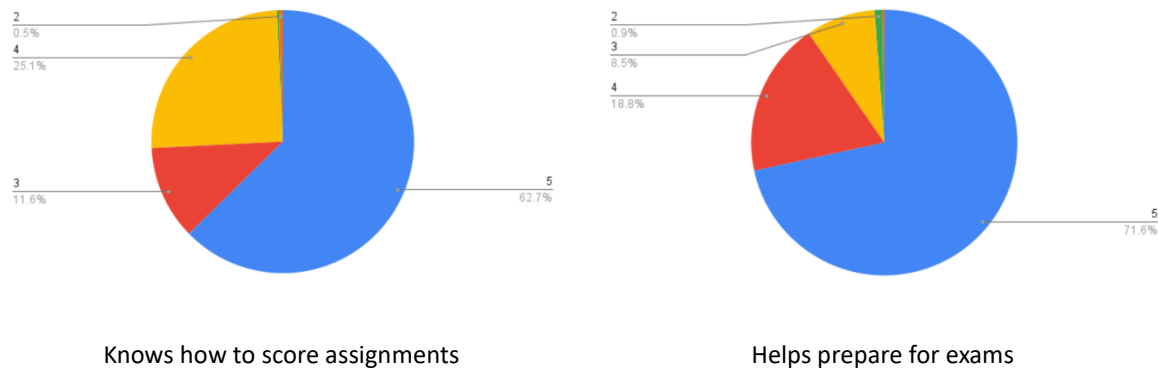
Experience of how difficult it is to access the app

Note: 5 strongly agree, 4 agree, 3 neutral, 2 disagree, 1 strongly disagree.

## 4.4. Whether or not the learning objectives have been successfully achieved

87.8% of students agreed with the question “I know very well how to get homework or attendance points while using learning activities that use quizzes edutech tools such as Kahoot, Edpuzzle, or Slido” did. The question “Learning activities using edutech tools to solve quizzes such as Kahoot, Edpuzzle, and Slido helped me prepare for the midterm or final exam.” 90.4% of the students answered that they agreed. As shown in the following <Table 4>.

**Table 4.** Learning goal achievement experience.

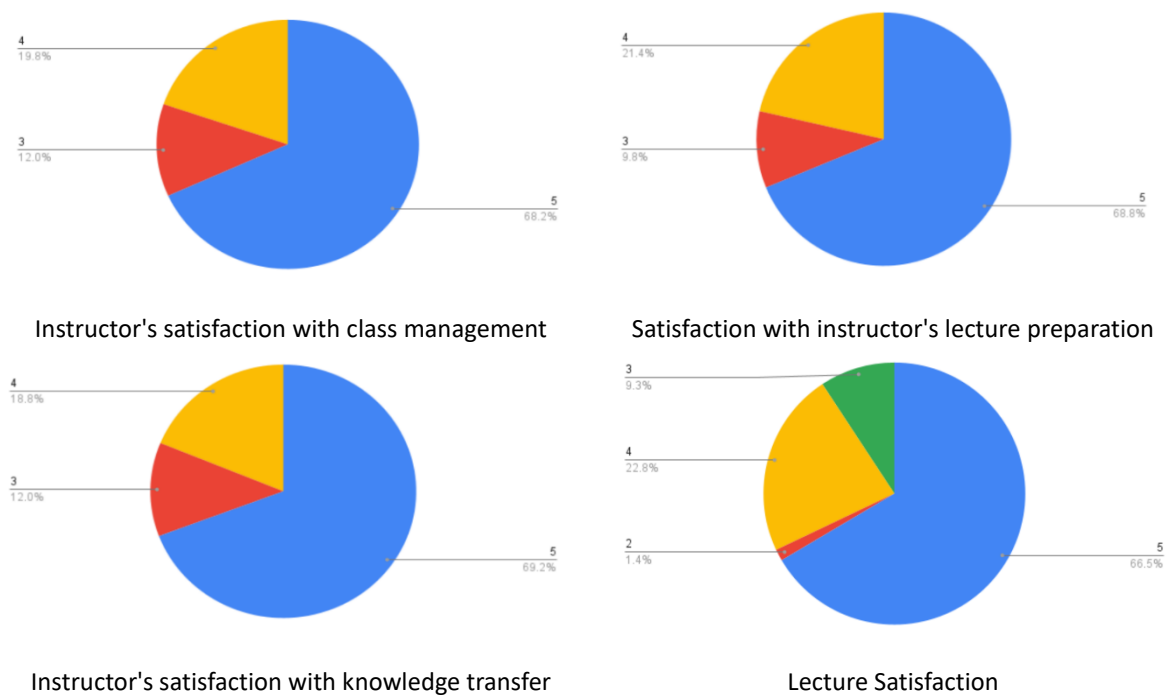


Note: 5 strongly agree, 4 agree, 3 neutral, 2 disagree, 1 strongly disagree.

#### 4.5. Lecture satisfaction

Questions such as “I feel that the instructor is managing progress well while using learning activities that utilize quiz-solving edtech tools such as Kahoot, Edpuzzle, and Slide” 88% of the students answered that they agreed. 90.2% in the question “The blended learning method using the professor’s ZOOM and the preparation of the gamification class lectures solved with quizzes such as Kahoot, Edpuzzle, and Slido were satisfactory” 90.2% of students responded that they agreed. 89.0% of students agreed with the question “Professor delivered enough specialized knowledge and skills related to the subject by instructing them to solve them with quizzes such as Kahoot, Edpuzzle, and Slide” answered. In the question “I am generally satisfied with this semester’s class(gaming learning activity)”, 89.3% of students answered that they agreed. As shown in the following <Table 5>.

**Table 5.** Lecture satisfaction.



Note: 5 strongly agree, 4 agree, 3 neutral, 2 disagree, 1 strongly disagree.

#### 4.6. Suggestions for improvement for your class

The students responded such as “Ideas such as gamification, which apply what they learned in the middle of class to problem solving, seem to be an essential educational method in this day and age.” Overall, there were many positive responses, but the negative responses and suggestions are as follows. “It was difficult because it was my first time to use a game app, but it was fun”, “Edpuzzle” was cumbersome and difficult to participate in class”

In particular, foreign students from Myanmar and Vietnam responded, “It was difficult to log in.” In addition, students who still lack digital literacy skills, such as first year students, responded that it is difficult to understand the gamification class.

#### 5. Conclusion

This researcher applied edutech tools related to gamification in the beauty curriculum and studied the effect of gamification on class participation motivation. As a result of applying the Gamification app to students as a task before, during, and after class, students showed positive responses in terms of concentration, learning experience, learning goal achievement, and lecture satisfaction. The students responded that using the gamification app was fun, informative, and an essential education in this era. However, on the other hand, some students responded that it was difficult and difficult to log in or use the gamification app. Therefore, it is necessary to conduct more thorough education on how to use the gamification app during orientation classes. In addition, separate mentoring education for students who complain of difficulties in each class will be required. In future research, we plan to conduct a detailed study on which elements of the gamification app were particularly useful and fun for students.

#### 6. References

##### 6.1. Journal articles

- [1] Kang Y. A Creative Teaching Method Combining Media Contents Technology with English and American Literature. *International Journal of Human & Disaster*, 4(2), 15-24 (2019). [\[Article\]](#)
- [2] Kang Y. A Design on Teaching and Learning Method for Creative Talent in the Fourth Industrial Revolution. *International Journal of Human & Disaster*, 5(1), 1-9 (2020). [\[Article\]](#)
- [3] Lee J. Research on Smart Learning Model based on 5 Steps Using Media-based Teaching and Learning Method. *Public Value*, 5(2), 1-12 (2020). [\[Article\]](#)
- [4] Kang Y. A Study on Development of Interactive Communication Education Model for Creative Convergence in Public Value. *Public Value*, 6(3), 61-69 (2021). [\[Article\]](#)
- [5] Lee J. 2021. Application and Satisfaction Study of Media-based Teaching & Learning Method in Beauty Education: Focusing on Flipped Learning using Google Classroom. *Public Value*, 6(1), 92-105 (2020). [\[Article\]](#)
- [6] Choi J & Choi J. Development of Gamification Model for Flipped Learning. *International Journal of Crisis & Safety*, 6(2), 68-79 (2021). [\[Article\]](#)
- [7] Chang, H. A Method of Graphic Representation of Mathematical Sentences for Game Generation. *Journal of Korea Game Society*, 12(5), 5-12 (2012).
- [10] Cha M. A Study for Game Education Contents of the Whole Generation Sympathy. *Journal of the Korea Computer Game Society*, 13, 147-153 (2008).
- [11] Park S. How Far has Gamification Evolved?. *Korea Game Society*, 12(1), 42-54 (2015).
- [12] Dicheva D & Dichev C & Agre G & Angelova G. Gamification in Education: A Systematic Mapping. *Study, Educational Technology & Society*, 18(3), 75-88 (2015).
- [14] Ham Y. A Study on the Development Model of Christian Education Contents Using Block-type Coding Based on Gamification. *Theology and Praxis*, 74, 703-734 (2021).

- [15] Lee K & Chang D. A Study on Participatory Branded Gamification for Metaverse Environment -Focusing on Global Brand Cases-. *Brand Design Studies*, 19(2), 277-289 (2021).
- [16] Kang Y. A Study on Development of Instructional Model for Smart Education based on Game App. *Humanities Society* 21, 10(3), 1617-1627 (2019).
- [17] Kim H. The Use of Socrative and Kahoot! in English Grammar. *Multimedia Assisted Language Learning*, 22(4), 57-78 (2019).
- [18] Kalleney NK. Advantages of Kahoot! Game-based Formative Assessments Along with Methods of Its Use and Application during the Covid-19 Pandemic in Various Live Learning Sessions. *Journal of Microscopy and Ultrastructure*, 8(4), 175-185 (2020).
- [19] Hwang J & Kim J & Hwang S. The Effect of Game-based Student Response System(GSRS) on Nursing Education: Focusing on Learning Engagement. *Journal of Convergence for Information Technology*, 11(1), 156-166 (2021).
- [20] Kim Y. The Effect of Multi-faceted Learning by Application Game-based Student Response System in Nursing Education: Focusing on Kahoot!. *Korea Entertainment Industry Association*, 15(4), 255-265 (2021).
- [24] Kim Y & Kim J. The Effect of Gamification on Learning Motivation and Learning Immersion of Pre-service Early Childhood Teachers. *Korea Early Childhood Education and Care Society*, 6(1), 1-17 (2021).
- [25] Hong S & Park J. Analysis of the Learning Effect of the Class Applying the Gamification -Based on NCS-based Occupational Basic Ability(Communication Ability)-. *The Journal of Image and Cultural Contents*, 16, 119-136 (2019).
- [26] Jung J & Lee M. Analysis of Learning Immersion and Class Participation in Gamification-based Classes. *Journal of Educational Innovation Research*, 31(3), 163-187 (2021).
- [27] Elizabeth H. Kahoot! Using a Game-based Approach to Blended Learning to Support Effective Learning Environments and Student Engagement in Traditional Lecture Theatres. *Technology, Pedagogy and Education*, 29, 191-202 (2020).
- [28] Kang Y. English Teaching Method Using Flipped Learning in the Artificial Intelligence Era. *Robotics & AI Ethics*, 4(2), 14-21 (2019). [Article]
- [30] Kim D & Steve D. Examining the Use of the Assure Model by K-12 Teachers. *Computers in the Schools -New York-*, 33(3), 153-168 (2016).

## 6.2. Thesis degree

- [8] Han B. Effect of Gamification-based Art Appreciation Class on Flow in Learning: Tested with High School Freshman Students. Ewha Womans University, Master Thesis (2019).
- [29] Isabel O. Gamification Effects on Users' Motivation to Participate: A Case of a Portuguese Q&A Community. Ajou University, Master Thesis (2020).

## 6.3. Books

- [12] Darina Di & Christo D & Gennady A & Galia A. Gamification in Education: A Systematic (2015).
- [13] Jane M. Everyone Plays the Game. RHK (2012).
- [21] Smaldino S & Lowther D & Russell J. Instructional Technology and Media for Learning(Tenth Edition). Academy (2011).

## 6.4. Additional references

- [9] Jeon H & OS & Park J & Kown S & Jeong M. Domestic and Foreign Classroom Learning Research( I ) -Focusing on Elementary Schools in Korea, England, France, and Japan-. Korean Institute of Curriculum and Evaluation Research Report (2008).
- [22] <https://ko.wikipedia.org/> (2021).
- [23] <https://blog.daehong.com/> (2021).



## 7. Appendix

### 7.1. Authors contribution

	Initial name	Contribution
Author	JL	-Set of concepts <input checked="" type="checkbox"/>
		-Design <input checked="" type="checkbox"/>
		-Getting results <input checked="" type="checkbox"/>
		-Analysis <input checked="" type="checkbox"/>
		-Make a significant contribution to collection <input checked="" type="checkbox"/>
		-Final approval of the paper <input checked="" type="checkbox"/>
		-Corresponding <input checked="" type="checkbox"/>
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### Creation of PUBLIC VALUE Service: The Effect of Cosmetics Consumption Needs on the Motive to Purchase Customized Cosmetics -With the Perception of Customized Cosmetics Dispensing Managers as a Moderating Effect-

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#### Abstract

**Purpose:** This study tried to analyze the relationship between the desire to consume cosmetics and the motivation to purchase customized cosmetics. In the relationship between these variables, the relationship between the perception of the customized cosmetics dispensing manager, who promotes the consumption desire, as a moderating effect, on the purchase motive for customized cosmetics was confirmed. The purpose is to expand the consumption of customized cosmetics and to present the public service value of the customized cosmetics system.

**Method:** A total of 561 questionnaires were used online for men and women of age of 10 to 69 who have purchased cosmetics nationwide. SPSS 22.0 was used as an empirical analysis method, and analysis was performed using multiple regression analysis and process macros. In order to find out the moderating effect of the perception of customized cosmetics dispensing managers, an analysis was conducted using Process Macro No. 59 model proposed by Hayes(2012).

**Results:** First, it was revealed that the independent variable, the desire to consume cosmetics, and the dependent variable, the purchase motive for customized cosmetics, had a significant positive effect and a significant influence relationship between the variables.

Second, the perception of the customized cosmetics dispensing manager is to motivate the purchase of customized cosmetics so that the brand/self-expression needs, the relationship/ride needs, the nature-friendly needs, and the pleasure needs are satisfied in a reasonable way in the relationship between the cosmetic consumption needs and the customized cosmetics purchase motivation. A modulatory effect in which an important inducing action is performed was confirmed. As a result, it was found that the influence of cosmetics consumption motives on the purchase motive of customized cosmetics is stronger when the customized cosmetics dispensing manager is known.

**Conclusion:** As a result of the study, it was confirmed that it is a factor that promotes the desire to consume cosmetics by satisfying the effectiveness of products according to the professionalism and trust of the customized cosmetics dispensing manager. In other words, the confirmation of the moderating effect of the perception of the customized cosmetics dispensing manager is to secure the safety of the ingredients and functions of cosmetics that can be induced by consumer claims in the process of cosmetic consumption desire leading to consumption behavior. These results can be said that the customized cosmetic system showed public service value. In addition, by revealing that the higher the awareness of the customized cosmetics dispensing manager, the higher the motivation to purchase customized cosmetics. This suggests the need for a differentiated marketing strategy.

**[Keywords]** Customized Cosmetics, Consumption Needs, Purchase Motive, Customized Cosmetics Dispensing Manager, Moderating Effect

## 1. Introduction

### 1.1. The background and purpose of the study

In modern society, consumption trends that value individual values and subjective satisfaction are rapidly spreading. Now, as the quality of life increases, it is an era that focuses on individuality and personal values, and customer-tailored "personalized marketing strategies" targeting their own customized products are actively being developed throughout the industry. As the trend of consumption that satisfies individual satisfaction is stronger than the latest trend in the rapidly changing era, customized products that emphasize individual tastes and specialties are increasing[1].

In 2017, "Rebuilding Consumeropia created by consumers" emerged as one of the keywords for consumption trends. This confirmed the change in consumption trends that are shifting from the past, which was the supply-oriented led by companies, to the current consumer-centered market tailored to individual consumers[2].

Recently, IT technologies that can support personalized services such as artificial intelligence, the Internet of Things, and marketing automation have been recognized for their potential, affecting the beauty industry affected by personal consumption culture in various ways[3]. In modern society in the era of the 4th industrial revolution, the purchase of beauty-related products will expand not only from the needs to pursue beauty but also from the purchase of customized cosmetics considering skin, constitution, and health[4].

The convergence of beauty and IT has led to a leap forward with augmented reality, customized cosmetics, and 3D printing technology. The beauty industry is welcoming a new consumption culture in line with the dynamic and rapidly changing era of the 4th industrial revolution[5]. In the era of the 4th Industrial Revolution, IoT, Cloud, and artificial intelligence technologies will rapidly change their customized cosmetics areas through connection with intelligent information technology based on big data and gradually expand to the global market, including lifestyle and business areas. Therefore, in modern society, connection through convergence is an essential keyword[6].

Park Hyun-gil(2017) reported in a marketing column titled "K Beauty + Tech Wave?" published by the Korea Marketing Research Institute that the cosmetics industry introduced the beauty tech industry using digital technology in 2017 and began to incorporate IT technology into the cosmetics industry. In addition, there were 1,000 overseas beauty startups and 63 domestic startups. Tipster, a beauty startup company, said it provided counseling services using digital technology[7]. In terms of industrial development, the introduction of customized cosmetics is an area of the beauty industry that is expected to lead to innovative growth in the cosmetics industry by converging with science and technology such as IT technology and genetic analysis along with the 4th industrial revolution.

In the era of the 4th industrial revolution, when the beauty industry combines IT technology and personalized services, customized cosmetics that reflect individual needs<sup>1</sup> have emerged as a new area in the cosmetics market, and a customized cosmetics market has been formed [8].

According to the "2019 Cosmetics Industry Analysis Report" surveyed by the Korea Health Industry Promotion Agency, as the customized cosmetics sales business begins in earnest, various types of customized cosmetics suitable for individual skin types and characteristics will be produced and sold to meet consumer needs.

Meanwhile, the Ministry of Food and Drug Safety newly established a customized cosmetics dispensing manager system<sup>2</sup>. That is, as the customized cosmetics system implemented on

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<sup>1</sup> Customized cosmetics refer to domestically made or imported cosmetics added with other cosmetics or raw materials prescribed by the Ministry of Food and Drug Safety, or cosmetics obtained or imported by subdividing the contents. Cosmetics Act(Act No. 16298, 2019.1.15.)

<sup>2</sup> A customized cosmetics dispensing manager is a person who engages in the mixing and subdividing of customized cosmetics pursuant to Article 3(4) of the Cosmetics Act, diagnoses the skin condition and preference of an individual, and mixes

March 14, 2020 begins in earnest, a customized cosmetics dispensing manager is essential to sell customized cosmetics. This is an institutionalization of professional qualifications so that only customized cosmetics dispensing managers can work on mixing cosmetics.

The introduction of the customized cosmetics system began with the intention that institutionalization was required in that the regulatory area belongs to an unclear gray zone, and active activation was needed to satisfy the people's diverse consumption needs and develop the cosmetics industry.

The customized cosmetics system is a support policy proposed by the government to foster a new growth engine for the cosmetics industry. The key is to allow mixing of small portions and existing products, which have been strictly prohibited for safety reasons. In order to ensure safety, it can be said that supplementary measures were prepared by establishing a customized cosmetics sales system and a customized cosmetics dispensing manager system. Prior to the implementation of the customized cosmetics system, an important issue is responsibility for various types of consumer issues that may arise when mixing products and raw materials. In addition, there are concerns about quality safety management in the process of blending products from various companies at separate stores where customized cosmetics dispensing managers are familiar with the blending of "self-made" products. In addition, concerns were raised about the differentiation of services by dispensing managers. In other words, as a matter of securing the safety of individual consumers and recognizing the newly established customized cosmetics dispensing manager, concerns have been raised about safety risks and differentiation of customized services in the blending process.

As the customized cosmetics system was implemented in earnest, there was a big change in the manufacturing and sales method of customized cosmetics from the perspective of cosmetics companies. It is time for companies related to the beauty industry to study customized marketing strategies to solve challenges to provide "customized" solutions by converging cosmetics ingredients and customized functions with IT technology, genetic analysis, and other related fields of science and technologies. Research on customized cosmetics surveyed so far includes studies on the perception of customized cosmetics systems, usage status and preference, purchasing behavior, development of customized beauty information provision services, and material development. Research on securing the safety of individual consumers and differentiating customized services according to the perception of customized cosmetics dispensing managers is very insufficient.

This study, which takes place at the present time when the customized cosmetics system was implemented, began with the aim of identifying cosmetics consumption needs and examining the moderating effect of consumers' perception of cosmetics dispensing managers that promote consumption needs. In addition, it is significant and purposeful to be used as a reference material contributing to the development of the customized cosmetics system and the development of the cosmetics industry by suggesting the need for a differentiated marketing strategy according to the moderating effect.

## **2. Research Method**

### **2.1. The subject and scope of the study**

This study ranged from a study on the effect of cosmetics consumption needs on customized cosmetics purchase motive for men and women aged 10 to 69 who live nationwide and have experience purchasing cosmetics. As a research method, a total of 561 questionnaires collected online from April 16 to April 22, 2020 were used.

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or subdivides the ingredients prescribed by the Minister of Food and Drug Safety. Cosmetics Act(Act No. 17250, 2020.4.7.)

## 2.2. Survey design and definition of variables

In analyzing the effect of cosmetics consumption needs on customized cosmetics purchase motive, the effect of consumption needs on customized cosmetics purchase motive was confirmed by setting the perception of customized cosmetics dispensing managers as a control variable for in-depth research. The questionnaire consisted of a total of 53 questions, and was measured on a 5-point Likert scale(44 questions) and a nominal scale(9 questions).

### 1) Definition and understanding of customized cosmetics

Customization means manufacturing products or providing services reflecting specific consumer needs. Since several years ago, demands for customization have emerged. Customized products contain both the meaning of personalization and customization, and it means that the self-image of products and consumers is consistent so that individual needs can be met through customized product and service information[9].

Previous studies defined customized cosmetics as "adding and using more ingredients necessary for the consumer to existing products" and "one that is manufactured more tailored to individual skin and tendencies"[10]. Gong Sun-mi and Kim Min-shin(2018) defined that "it is manufactured on the spot according to individual needs" [11].

The definition of "customized cosmetics" specified in the Cosmetics Act is "a cosmetic product obtained by adding other cosmetics or raw materials determined by the Ministry of Food and Drug Safety to the contents of cosmetics manufactured or imported." In addition, it was said that "the contents of cosmetics prescribed by the Prime Minister's Decree, such as solid soap, are excluded."(Enforcement Date: April 7, 2020)(Cosmetics Act No. 17250) In addition, the matters reported by the customized cosmetics sales business are also specified.

### 2) Desire for consumption

The desire for consumption is a fundamental element explaining the social culture of a given era, and is not fixed regardless of the times, but very flexible according to the social changes of the times[12]. This can also be said to be a sense of deficiency that consumers feel something is insufficient in their consumption. The desire to pursue something that can fill the deficiency is expressed in various ways.

Kim Min-jung(2007) said that it goes beyond the basic and absolute ideology of necessity for something, such as economic effect, in human consumption culture life. It was defined as "a consumption desire subjectively required or desired for more material and mental enrichment[13]." The desire for consumption appears in a variety of ways to pursue something that can fill the deficiency in consumer life. This can be said to explain the essential meaning of needs and the potential needs that consumers gain through the consumption of products or services. In addition, it can be said that it is a process that does its best to show its potential from the perspective of self-realization[14].

In this study, it was defined that the sub-factors of consumption desire are the source of consumers' consumption of cosmetics, consumers' purchasing behavior is deeply related to cosmetics consumption desire, and can meet the needs and expectations of customized cosmetics purchase decision-making. Therefore, based on the research of Kim Min-jung(2007), who developed a measure of consumption needs, and the research of Kim Sook-young(2001)[15] and Lee Jin(2012)[16], who developed a measure of consumption needs, the sub-factors of cosmetics consumption needs were referenced. These are a total of six factors: brand and self-expression needs, aesthetics and youthfulness needs, safety needs, relationship and bandwagon needs, nature-friendliness needs, and pleasure needs. <Table 1> shows the contents and definitions of sub-factors of consumption needs.



**Table 1.** Sub-factors of consumption needs.

Sub-factors	Content and definition	Items	Source
Brand and self-expression needs	Desire to consume identifying with the brand one chose, symbolizing one's authority or honor, and trying to cultivate the brand's image	7	Kim Ki-oh(2009)  Kim Min-jung(2007)  Kim Sook-young(2001)  Lee Jin(2012)
Aesthetics and youthfulness needs	Desire to consume products that can delay aging, and as consuming products that make oneself look younger and satisfy one's aesthetics	6	
Safety needs	Desire to consume products suitable for one's physical characteristics and safe ingredients, and to consume products certified by clinical results	5	
Relationship and bandwagon needs	Desire to feel homogeneous with people around oneself with cosmetics, to be interested in cosmetics purchased by people around oneself, and to consume cosmetics that follow the popular trend	6	
Nature-friendliness needs	Desire to consume and have faith in products that are suitable for one's physical characteristics and nature-friendly and in the manufacturing or preparation process	3	
Pleasure needs	Desire for pleasure in wanting to consume cosmetics that can satisfy the five senses, or in order to feel pleasant and enjoyable when applying cosmetics	2	

### 3) Motivation to purchase customized cosmetics

Purchasing motive is a direct reason for inducing consumer behavior caused by the expression of consumers' desire for consumption. It is also a widely applied factor that promotes consumption activities and determines consumers' consumption patterns, such as consumption habits and purchase decision-making. This is the focus of the purchasing process and induces purchasing behavior to purchase specific products or services to satisfy needs. In particular, analyzing the purchase motive for customized cosmetics is an important factor in maintaining consumers by determining the value of perception that consumers give to customized cosmetics [17].

According to the theory of previous studies, this study defines cosmetics purchase motive as an internal driver of consumers who act to purchase cosmetics. This is the internal driver of all human actions, and the direction of tangible and intangible consumer needs is also the direct cause of actions. The following four sub-factors were determined based on the studies of Kim Ki-ok et al.(2006)[18], Han Sung-ji, Kim Moon-sook(2002)[19], Lee Jin(2012), Lee Young-mi and Lee Ok-hee(2003)[20]. These include trend and other motives, skin care and aesthetic motives, economic motives, and product change motives. <Table 2> shows the contents and definition of the purchase motive for customized cosmetics.

**Table 2.** Sub-factors of motivation to purchase customized cosmetics.

Sub-factors	Content and definition	Items	Source
Trend and other-directed motive	Motive to purchase it because it is used by celebrities or seen on other people's cosmetics, magazines, and TV, or recommended by salespeople or other people	4	Kim Ki-oh et al. (2006) Lee Young-mee,

Skin maintenance and aesthetics motive	Motive to purchase to maintain skin protection and to make one's skin stand out or look beautiful and pretty by cosmetics. Motive to purchase for one's own skin type that changes according to the season	4	Lee Ok-hee (2003) Hahn Seong-ji, Kim Moon-sook (2002) Lee Jin (2012)
Economic motive	Motive to purchase because it is economical and affordable in terms of price	3	
Product change motive	Motive to buy other products that fit one's skin because the current products don't fit one's skin, get tired of it, and have used them for a long time	4	

#### 4) Customized cosmetics dispensing manager

According to Article 3(4) of the Cosmetics Act, a customized cosmetics dispensing manager is defined as a "person who intends to engage in mixing and subdividing customized cosmetics." They are experts who diagnose individual skin conditions and preferences of manufactured or imported cosmetics and add raw materials determined by the Ministry of Food and Drug Safety to the cosmetics to mix or subdivide them. (Cosmetics Act, Act No. 17250, Article 3(4)). Prior to the implementation of the customized cosmetics system, the Ministry of Food and Drug Safety established a customized cosmetics dispensing manager system (Ministry of Food and Drug Safety, 2019), and the world's first "customized cosmetics dispensing manager system" took effect on February 22, 2020.

Customized cosmetics dispensing managers are part of the institutionalization of the Cosmetics Act as prescribed by the Prime Minister's Decree. This is the purpose of fostering customized cosmetics experts at the policy level for creating new jobs, and also means that customized cosmetics services are provided through customized cosmetics dispensing managers. Customized cosmetics dispensing managers play a role in mixing pigments or fragrances with the contents of the cosmetics or subdividing them according to the individual's skin condition and preference. It is not "manufacturing," but "preparing or dispensing".

### 2.3. Data analysis

SPSS 22.0 was used for statistical analysis, and frequency analysis was performed to analyze the general characteristics of the sample. Exploratory factor analysis and reliability analysis were conducted to verify the validity of the measurement tool. Principal component analysis was used to minimize information loss while extracting factors that explain as much of the variance of the original variables as possible. The analysis was conducted using Varimax rotation, which rotates the factor until the factor structure is most pronounced while maintaining the independence of the factor. Multiple regression analysis and process macros were used to verify the hypothesis.

The general characteristics of the study subjects are as follows. For this study, a survey was conducted on 561 people, and the general characteristics of the study subjects are as follows. Gender: 260(46.3%) men and 301(53.7%) women. Age: 45 people aged 14-19(8.0%), 194 people aged 20-29(34.6%), 179 people aged 30-39, 63 people aged 40-49, and 80 people aged 50-69(14.3%).

In the case of marital status, 340 people(60.6%) were unmarried and 221(39.4%) were married. In the case of final academic background, 124 high school graduates(22.1%), 73 junior college graduates(13.0%), 326 college graduates(58.1%), and 38 graduate students(6.8%).

In the case of occupations, 205 general office workers(36.5%), 53 sales/service workers(9.4%), 10 other sales workers(1.8%), 74 professional service providers(13.2%), 36 housewives(6.4%), 122 students(21.7%), and 61 for other jobs(10.9%). In the case of monthly average income, less than 1 mil. won: 172 people(30.7%); 1-2 mil. won: 101 people(18.0%); 2-3 mil. won: 151 people(26.9%); 3-4 mil. won: 73 people(13.0%); 4-5 mil. won: 22 people(3.9%); and more than 5 mil.

won: 42 people(7.5%). In the case of residential areas, 337 people(60.1%) from Seoul, Gyeonggi, and Incheon; 137 people(24.4%) from Gyeongsang, Daegu, Busan, and Ulsan; 29 people(5.2%) from Jeolla and Gwangju; 44 people(7.8%) from Chungcheong and Sejong; 4 people(0.7%) from Jeju; and 10 people(1.8%) from Gangwon.

## 2.4. Validation

Exploratory factor analysis was conducted to verify the validity of the measurement tool used in this study. Principal component analysis was used to minimize information loss while extracting factors that explain as much of the variance of the original variables as possible, and Varimax rotation was used to rotate factors until the factor structure was most pronounced while maintaining factor independence. The factor classification was composed of one factor when the eigenvalue was 1 or more, and when the factor loading exceeded .40, it was classified as the corresponding factor.

### 1) Desire to consume cosmetics

As for cosmetic consumption needs, one item(relationship and bandwagon needs) that hinder validity was excluded, and finally, factor analysis was conducted with 28 items. As a result of factor analysis, the KMO measure was .927. In addition, Bartlett's sphericity verification result was also significant( $p<.000$ ), so the factor analysis model was judged to be suitable. Cosmetics consumption desire was classified as a factor of 6, and six factors showed 70.9% factor explanatory power, as shown in.

### 2) Motivation to purchase customized cosmetics

As for the motive for purchasing customized cosmetics, one item(Product change motive) that hinders the validity was excluded, and finally, factor analysis was conducted into 14 items. As a result of factor analysis, the KMO measurement was .816, and Bartlett's sphericity verification result was also significant( $p<.000$ ), so the factor analysis model was judged to be suitable. customized Cosmetics purchase motive was classified into four factors, and the four factors showed 65.2% factor explanatory power, as shown in.

## 2.5. Reliability analysis

Through the survey of this study, reliability analysis was conducted to determine whether respondents consistently responded to the survey, and the alpha coefficient of all variables was 0.6 or higher, indicating high reliability as shown in <Table 3>.

**Table 3.** Reliability analysis.

Variables		No. of items	Cronbach's $\alpha$
Desire to consume cosmetics	Brand and self-expression needs	7	.926
	Aesthetics and youthfulness needs	6	.906
	Safety needs	5	.879
	Relationship and bandwagon needs	5	.863
	Nature-friendliness needs	3	.865
	Pleasure needs	2	.742
	Total	28	.927

Motive for purchasing customized cosmetics	Trend and other-directed motive	4	.837
	Skin maintenance and aesthetics motive	4	.718
	Economic motive	3	.832
	Product change needs	3	.663
	Total	14	.800

## 2.6. Empirical analysis

1) Differences in the perception of customized cosmetics dispensing managers according to general characteristics

A chi-squared test was conducted to determine whether there was a difference in the intention to purchase customized cosmetics according to general characteristics (gender, age, marital status, final education, occupation, monthly average income) and perception of customized cosmetics dispensing managers.

As a result of the significance test, women were statistically significant as they were more aware of customized cosmetics dispensing managers than men ( $\chi^2=4.120$ ,  $p<.05$ ). In the case of final education, there was a high awareness of customized cosmetics dispensing managers in the order of high school graduation, college enrollment and graduation, junior college enrollment and graduation, and there was a statistically significant difference ( $\chi^2=9.665$ ,  $p<.05$ ). In the case of differences according to occupation, housewives, sales, and service workers showed relatively high awareness of customized cosmetics dispensing managers, showing statistically significant differences ( $\chi^2=14.225$ ,  $p<.05$ ).

2) Differences in cosmetics consumption needs according to the perception of customized cosmetics dispensing managers

It was found that there was a statistically significant difference according to the perception of customized cosmetics dispensing managers in the overall cosmetic consumption needs brand and self-expression needs, aesthetics and youthfulness needs, relationship and bandwagon needs, nature-friendliness needs, pleasure needs. All of these respondents who knew a customized cosmetics dispensing manager were higher than those who did not know in the overall cosmetic consumption needs ( $t=8.087$ ,  $p<.000$ ), brand and self-expression needs ( $t=8.963$ ,  $p<.000$ ), aesthetics and youthfulness needs ( $t=3.273$ ,  $p<.01$ ), relationship and bandwagon needs ( $t=7.698$ ,  $p<.000$ ), nature-friendliness needs ( $t=4.147$ ,  $p<.000$ ), and pleasure needs ( $t=6.107$ ,  $p<.000$ ) as shown in.

## 3. Results

### 3.1. The moderating effect of perception of customized cosmetics dispensing managers

An analysis using Process Macro No. 59 model proposed by Hayes(2012) [21] was conducted to verify whether there is an effect of controlling the perception of customized cosmetics dispensing managers in the relationship between cosmetic consumption needs and cosmetic purchase motive. The independent variable, the desire to consume cosmetics, has a significant positive effect on the dependent variable, customized cosmetic purchase motive ( $B=0.632$ ,  $p<.000$ ). In the relationship between cosmetics consumption needs and customized cosmetics purchase motive, the moderating effect of perception of customized cosmetics dispensing managers was statistically significant ( $B=0.345$  and  $p<.000$ ), which is shown in <Table 4>. It can be said that the

influence of customized cosmetics consumption desire on cosmetics purchase motive becomes stronger if one knows a customized cosmetics dispensing manager.

**Table 4.** The moderating effect of perception of customized cosmetics dispensing managers.

DV	IV	B	SE	t	p	F(R <sup>2</sup> )
Motive for purchasing customized cosmetics	Needs to consume cosmetics	0.632	0.030	20.893***	<.000	182.317*** (.495)
	Perception of customized cosmetics dispensing manager	0.030	0.039	0.769	.443	
	Motive for purchasing Cosmetics × perception of customized cosmetics dispensing manager	0.345	0.069	5.001***	<.000	

Note: Whether or not a customized cosmetics dispensing manager is perceived (No=0), \* p<.05 \*\*\* p<.000.

### 3.2. The moderating effect of perception of personalized cosmetics dispensing managers on the relationship between sub-factors of consumption desire and motivation for purchasing customized cosmetics

In the relationship between cosmetics consumption desire and customized cosmetics purchase motive, the moderating effect of the perception of customized cosmetics dispensing managers was significant. In order to capture more detailed characteristics in marketing strategies, an analysis was conducted using Process Macro No. 1 model proposed by Hayes(2012) to confirm the moderating effect of the perception of customized cosmetics dispensing managers in the relation between cosmetics consumption needs and customized cosmetics purchase motive.

1) The moderating effect of perception of customized cosmetics dispensing managers in the relationship between brand and self-expression needs and customized cosmetics purchase motive

Brand and self-expression needs, an independent variable, have a significant positive effect on the variable motive for purchasing customized cosmetics (B=0.303, p<.000) In the relation between brand and self-expression needs and motive for purchasing customized cosmetics, the dependent perception of customized cosmetics dispensing managers has the moderating effect. The influence of brand and self-expression needs on motive for purchasing customized cosmetics can be said to be stronger when they are aware of customized cosmetics dispensing managers, as shown in <Table 5>.

**Table 5.** The moderating effect of perception of customized cosmetics dispensing managers in the relationship between brand and self-expression needs and customized cosmetics purchase motive.

DV	IV	B	SE	t	p	F(R <sup>2</sup> )
Motive for purchasing customized cosmetics	Brand and self-expression needs	0.303	0.021	14.134***	<.000	93.947*** (.336)
	Perception of customized cosmetics dispensing manager	0.062	0.046	1.356	.176	
	Brand and self-expression needs × Perception of customized cosmetics dispensing manager	0.201	0.049	4.072***	<.000	

Note: Whether or not a customized cosmetics dispensing manager is perceived(No=0), \*\*\* p<.000.

2) The moderating effect of perception of customized cosmetics dispensing managers in the relationship between aesthetics and youthfulness needs and customized cosmetics purchase motive

The independent variables aesthetics and youthfulness needs have a significant positive effect on the dependent variable motive for purchasing customized cosmetics(B=0.283, p<.000). The perception of a customized cosmetics dispensing manager as a control variable has a significant positive effect on the dependent variable motive for purchasing customized cosmetics(B=0.273, p<.000). The interaction term between aesthetics and youthfulness needs and perception of a customized cosmetics dispensing manager had no significant effect on motive for purchasing customized cosmetics. Therefore, in the relationship between aesthetics and youthfulness needs of cosmetics consumption needs and motive for purchasing customized cosmetics, the moderating effect of the perception of a customized cosmetics dispensing manager was not significant, as shown in <Table 6>.

**Table 6.** The moderating effect of perception of customized cosmetics dispensing managers in the relationship between aesthetics and youthfulness needs and customized cosmetics purchase motive.

DV	IV	B	SE	t	p	F(R <sup>2</sup> )
Motive for purchasing customized cosmetics	Aesthetics and youthfulness needs	0.283	0.030	9.584***	<.000	50.948*** (.215)
	Perception of customized cosmetics dispensing manager	0.273	0.045	6.137***	<.000	
	Aesthetics and youthfulness needs × Perception of customized cosmetics dispensing manager	0.087	0.071	1.228	.220	

Note: Whether or not a customized cosmetics dispensing manager is perceived(No=0), \*\*\* p<.000.

3) The moderating effect of perception of customized cosmetics dispensing managers in the relationship between safety needs and customized cosmetics purchase motive



Safety needs, an independent variable, have a significant positive effect on the dependent variable motive for purchasing customized cosmetics ( $B=0.186$ ,  $p<.000$ ). Perception of customized cosmetics dispensing managers, which is a control variable, has a significant positive effect on the dependent variable, motive for purchasing customized cosmetics ( $B=0.336$ ,  $p<.000$ ). The interaction term between safety needs and perception of customized cosmetics dispensing managers did not significantly affect motive for purchasing customized cosmetics.

Therefore, in the relationship between safety needs and motive for purchasing customized cosmetics in cosmetics consumption needs, the moderating effect of perception of customized cosmetics dispensing managers was not significant, as shown in <Table 7>.

**Table 7.** The moderating effect of perception of customized cosmetics dispensing managers in the relationship between safety needs and customized cosmetics purchase motive.

DV	IV	B	SE	t	p	F(R <sup>2</sup> )
Motive for purchasing customized cosmetics	Safety needs	0.186	0.034	5.469***	<.000	28.811*** (.134)
	Perception of customized cosmetics dispensing manager	0.336	0.046	7.351***	<.000	
	Safety needs × Perception of customized cosmetics dispensing manager	0.062	0.074	0.844	.399	

Note: Whether or not a customized cosmetics dispensing manager is perceived (No=0), \*\*\*  $p<.000$ .

4) The moderating effect of perception of customized cosmetics dispensing managers in the relationship between relationship and bandwagon needs and customized cosmetics purchase motive

The independent variable, relationship and bandwagon needs, have a significant positive effect on the dependent variable motive for purchasing customized cosmetics ( $B=0.399$ ,  $p<.000$ ). In the relationship between relationship and bandwagon needs and motive for purchasing customized cosmetics, the moderating effect of perception of customized cosmetics dispensing managers was shown statistically significant. The effect of relationship and bandwagon needs on motive for purchasing customized cosmetics can be said to be stronger when they are aware of customized cosmetics dispensing managers, as shown in <Table 8>.

**Table 8.** The moderating effect of perception of customized cosmetics dispensing managers in the relationship between relationship and bandwagon needs and customized cosmetics purchase motive.

DV	IV	B	SE	t	p	F(R <sup>2</sup> )
Motive for purchasing customized cosmetics	Relationship and bandwagon needs	0.399	0.019	20.775***	<.000	182.122*** (.495)
	Perception of customized cosmetics dispensing manager	0.060	0.038	1.565	.118	
	Relationship and bandwagon needs × perception of customized cosmetics dispensing manager	0.168	0.042	3.965***	<.000	

Note: Whether or not a customized cosmetics dispensing manager is perceived (No=0), \*\*\*  $p<.000$ .

5) The moderating effect of perception of customized cosmetics dispensing managers in the relationship between nature-friendliness needs and customized cosmetics purchase motive

Nature-friendliness needs, an independent variable, have a significant positive effect on the dependent variable, motive for purchasing customized cosmetics ( $B=0.211$ ,  $p<.000$ ). Perception of customized cosmetics dispensing managers, which is a control variable, has a significant positive effect on the dependent variable, motive for purchasing customized cosmetics ( $B=0.250$ ,  $p<.000$ ). In the relationship between nature-friendliness needs and motive for purchasing customized cosmetics, the moderating effect of perception of customized cosmetic dispensing managers is statistically significant ( $B=0.250$ ,  $p<.000$ ). The impact of nature-friendliness needs on motive for purchasing customized cosmetics can be said to be stronger if they are aware of customized cosmetic dispensing managers, as shown in <Table 9>.

**Table 9.** The moderating effect of perception of customized cosmetics dispensing managers in the relationship between nature-friendliness needs and customized cosmetics purchase motive.

DV	IV	B	SE	t	p	F(R <sup>2</sup> )
Motive for purchasing customized cosmetics	Nature-friendliness needs	0.211	0.026	8.232***	<.000	49.424*** (.210)
	Perception of customized cosmetics dispensing manager	0.250	0.046	5.477***	<.000	
	Nature-friendliness needs × Perception of customized cosmetics dispensing manager	0.250	0.063	3.941***	<.000	

Note: Whether or not a customized cosmetics dispensing manager is perceived (No=0), \*\*\*  $p<.000$ .

6) The moderating effect of perception of customized cosmetics dispensing managers in the relationship between pleasure needs and customized cosmetics purchase motive

Pleasure needs, an independent variable, have a significant positive effect on the dependent variable, motive for purchasing customized cosmetics ( $B=0.320$ ,  $p<.000$ ). Perception of customized cosmetics dispensing managers, which is a control variable, has a significant positive effect on the dependent variable, motive for purchasing customized cosmetics ( $B=0.133$ ,  $p<.01$ ). In the relationship between pleasure needs and motive for purchasing customized cosmetics, the moderating effect of perception of customized cosmetic dispensing managers is statistically significant ( $B=0.232$ ,  $p<.000$ ). The impact of pleasure needs on motive for purchasing cosmetics can be said to be stronger if they are aware of customized cosmetic dispensing managers, as shown in <Table 10>.

**Table 10.** The moderating effect of perception of customized cosmetics dispensing managers in the relationship between pleasure needs and customized cosmetics purchase motive.

DV	IV	B	SE	t	p	F(R <sup>2</sup> )
Motive for purchasing customized	Pleasure needs	0.320	0.021	15.533***	<.000	40.608*** (.180)

cosmetics	Perception of customized cosmetics dispensing manager	0.133	0.042	3.214**	.001
	Pleasure needs × perception of customized cosmetics dispensing manager	0.232	0.047	4.913***	<.000

Note: Whether or not a customized cosmetics dispensing manager is perceived(No=0), \*\* p<.01 \*\*\* p<.000.

### 3.3. Summary of results

Summarizing the results of verifying the moderating effect of perception of customized cosmetics dispensing managers, the relationship between cosmetics consumption needs and motive for purchasing customized cosmetics showed the moderating effect of perception of customized cosmetics dispensing managers. When looking at the perception of customized cosmetics dispensing managers as a control variable, it was found that the perception of customized cosmetics dispensing managers partially controls the relationship between sub-factors of cosmetics consumption needs and motive for purchasing customized cosmetics. In detail, the sub-factors of cosmetic consumption needs, aesthetics and youthfulness needs, and safety needs did not show a significant moderating effect by the perception of customized cosmetic dispensing managers in relation to motive for purchasing customized cosmetics. Brand and self-expression needs, relationship and bandwagon needs, nature-friendliness needs, and pleasure needs showed significant moderating effects of the perception of customized cosmetics dispensing managers in the relationship of motive for purchasing customized cosmetics.

### 3.4. Discussion

More than half of the respondents said they knew about the customized cosmetics dispensing manager system as a result of the difference in perception of customized cosmetics dispensing managers according to general characteristics. In the results of the survey by Choi Esther(2019)[22], the perception of customized cosmetics was low, while response to the necessity of a customized cosmetics dispensing manager system was very positive. Looking at the items, the customized cosmetics dispensing manager system consists of items such as "help create jobs(including start-ups), help develop the cosmetics industry, help consumers trust their products, help consumers choose cosmetics suitable for their skin, and intend to make and use personal cosmetics." This is a positive result expected by the Ministry of Food and Drug Safety for the customized cosmetics dispensing manager system, and it is interpreted that they have low awareness of customized cosmetics dispensing managers but high expectations when the system is implemented.

On the other hand, the perception of customized cosmetics dispensing managers was analyzed by dividing them into items such as gender, age, marital status, final education, occupation, and average monthly income. As a result, significant results were found in gender, final education, and occupation. Women showed higher awareness of customized cosmetics dispensing managers than men, but the difference was not large, which seems to be the result of a large number of respondents being women.

As a result of the awareness survey of customized cosmetics dispensing managers according to their final education, significant results were found in the order of high school graduation, college enrollment and graduation, junior college enrollment and graduation, and graduate school enrollment and graduation. In the case of occupations, housewives, sales, and service workers had relatively high awareness of customized cosmetics dispensing managers. Looking at the research results of Cho Yoo-kyung(2019)[23], there was a significant difference between men and women in the differences in advertising commitment, information reliability, and

information entertainment according to gender and age. In the case of gender, women were found to be high in all variables such as advertising commitment and information entertainment. It was confirmed that men perceived only information reliability higher than women. In addition, in terms of differences in purchasing behavior, involvement, and purchasing characteristics, it can be seen that women were higher than men in advertising commitment, information entertainment, the number of purchases of basic cosmetics, and average expenditure.

Therefore, in this study, the results of the relatively high housewife's perception of customized cosmetics dispensing managers according to occupation appear to be in a similar context to the research of Cho Yoo-kyung(2019), and it is considered effective to improve the perception of the advertisement composition.

In addition, in the relationship between cosmetics consumption needs and motive for purchasing cosmetics, the moderating effect of perception of customized cosmetic dispensing managers was significant, indicating that the effect of cosmetic consumption needs on motive for purchasing customized cosmetics becomes stronger.

Brand and self-expression needs, relationship and bandwagon needs, nature-friendliness needs, and pleasure needs were found to have a significant influence on purchase customized cosmetics motive as sub-factors of cosmetics consumption needs. It was not significant in aesthetics and youthfulness needs and safety needs. In other words, brand and self-expression needs, relationship and bandwagon needs, nature-friendliness needs, and pleasure needs have a stronger influence on motive for purchasing customized cosmetics when they know about customized cosmetic dispensing managers. As a result, the perception of customized cosmetics dispensing managers is confirmed to have a direct moderating effect in the causal relationship between cosmetics consumption needs and motive for purchasing customized cosmetics. These results can be said that the motive for purchasing customized cosmetics is not established independently, but is formed based on the desire to consume cosmetics.

Customized cosmetics that satisfy detailed needs are consumer goods that companies should pay attention to in the beauty industry. With the full implementation of the customized cosmetics system, cosmetics companies should also pay attention to securing safety needs by deriving the suitability of consumer needs according to consumption needs and solving quality safety management and "customized" solutions using the expertise of customized cosmetics and dispensing managers.

Based on the above results, it is considered effective to establish marketing strategies for each sub-factor of cosmetics consumption needs and cosmetics purchase motive targeting consumption trends that have recently been actively developed. In particular, it is necessary to promote customized cosmetics based on consumers' desire to consume cosmetics and provide accurate information on customized cosmetics. In addition, it is necessary to find customized cosmetics marketing means and methods through consumers' desire to consume cosmetics, thereby establishing a marketing process centered on the desire to consume cosmetics made with consumers.

## 4. Conclusion

This study focused on the moderating effect of the perception of customized cosmetics dispensing managers to find out the effect of cosmetics consumption needs on customized cosmetics purchase motive for men and women aged 14 to 69 nationwide.

The research results are as follows.

First, it was revealed that the independent variable, the desire to consume cosmetics, and the dependent variable, motive for purchasing cosmetics, have a significant positive effect and a significant influence relationship between variables.

Second, the perception of customized cosmetics dispensing managers confirmed the moderating effect of inducing motive for purchasing cosmetics so that the brand and self-expression needs, relationship and bandwagon needs, nature-friendliness needs, and pleasure needs are satisfied in a reasonable direction in the relationship between cosmetic consumption needs and motive for purchasing cosmetics.

As a result, it was confirmed that the desire to consume cosmetics that reflects the characteristics of modern society is an important factor in forming a consumption culture. This study confirmed the moderating effect of the perception of customized cosmetics dispensing managers attempted to revitalize the cosmetics market for "customized marketing." This study revealed that the higher the awareness of the cosmetic of the dispensing manager, the higher the motive to purchase customized cosmetics. It also revealed that this is an important factor that can explain the relationship between the desire to consume cosmetics and the motive to purchase customized cosmetics. Therefore, it can be significant that this study derived consumption needs by closely examining consumers' needs for customized cosmetics. In the future, the customized cosmetics dispensing manager system can develop the customized cosmetics industry and satisfy consumers' high expectations for customized cosmetics dispensing managers. To this end, it is necessary to provide educational programs to acquire public value purchases of products and customized services.

## 5. References

### 5.1. Journal articles

- [1] Lee MS & Song TI. A Study on Reliability and Purchase Behavior of Customized Cosmetic -Focus on 20 to 50 Aged Female Living in Gwangju. *Journal of the Korean Society of Design Culture*, 26(3), 283-293 (2020).
- [2] Seonmi Gong & Minshin Kim. Actual Use and Preference for Free Cosmetics by age. *Korean Society of Aesthetics*, 14(3), 331-342 (2018).
- [3] Kwon SS & Jeon HJ. Purchasing Behavior of Customized Cosmetics according to Age. *Journal of the Korean Society for Aesthetic Art*, 21(1), 229-240 (2020).
- [4] Yoon HJ & Kim ES. Creation of Public Service Value based on the Mediating Effect of Customized Cosmetics Salesperson Customer Empathy in the Relation between Middle-aged Women's Cosmetic Consumption Needs and Customized Cosmetic Purchase Intentions. *Public Value*, 6(2), 28-44 (2021). [\[Article\]](#)
- [5] Shim YJ & Choi JS. A Study on the Development Direction of the Beauty Industry Following the 4th Industrial Revolution. *Journal of the Korean Society of Nail Beauty*, 5(1), 29-35 (2017).
- [6] Kim TS & Lee JB. Analysis of Perception of Naturopathy Convergence and Utilization Satisfaction Perceived by Skin Beauty Industry Workers. *Protection Convergence*, 5(2), 94-102 (2020). [\[Article\]](#)
- [7] Park HG. K Beauty + Tech Wave. *Korea Marketing Research Institute*, 51(11), 42-51 (2017).
- [9] Lim AY. Measures to Enhance Brand Image through Customizing Service -Focused on Domestic and Foreign Case Studies-. *Communications Design Society*, 50, 1770-180 (2015).
- [10] Choi KI. Analysis of Skin Concerns by Age Group and a Study on Customized Cosmetics. *Journal of the Korean Society of Makeup Design*, 12(1), 15-29 (2016).
- [11] Gong SM & Kim MS. Actual use and Preference for Free Cosmetics by Age. *Korean Society of Aesthetics*, 14(3), 331-342(2018).
- [12] Kim KO. Relationship between Consumption Desire, Participation Motive, and Consumption Behavior of Sports Center Users. *Journal of the Korean Society for Sports Sociology*, 22(4), 193-212 (2009).
- [14] Lee CY & Lee JB & Na EG. Psychological Health Relationbetween Perception, Appearance Satisfaction, and Happiness of Women Participating in Jewelry Therapy. *Protection Convergence*, 6(1), 12-21 (2021). [\[Article\]](#)

- [17] Son SA & Kim ES & Park HN. The Mediating Effect of the Perceived Value in the Relationship Between the Self-paced Motivation of Purchase of Beauty Device and the Intent to Use Continuously for Middle-aged Women Bodily. *Kinesiology*, 6(3), 1-11, (2021). [\[Article\]](#)
- [18] Kim KO & Yoo HJ & Nam SJ. Development of a Purchase Motivation Scale based on Self-determination Theory. *Korean Journal of Home Management*, 24(1), 71-82 (2006).
- [19] Han SJ & Kim MS. A Study on the Different Clothing Purchasing Motives and Information Sources for Lifestyles of Women in their 50s and 60s. *The Society of Clothing Culture*, 10(2), 116-131 (2002).
- [20] Lee YM & Lee OH. A Study on Clothing Purchasing Motivation and Product Evaluation Criteria for Working Women's Shopping Propensity. *The Research Journal of the Costume Culture*, 11(2), 193-207 (2003).
- [22] Choi E. Awareness Survey on Customized Cosmetics and Customized Cosmetics Dispensing Manager System. *Journal of the Korean Society of Aesthetics*, 25(5), 1229-1238 (2019).

## 5.2. Thesis Degree

- [13] Kim MJ. Paper Title Development of a Scale for Measuring Consumption Needs. Sungkyunkwan University, Doctoral Thesis (2007).
- [15] Kim SY. Paper Title a Study on the Characteristics of Sports Consumption Culture: Focusing on Baudrillard Consumer Social Theory. Yonsei University, Doctoral Thesis (2001).
- [16] Jin Lee. Paper Title The Effect of Cosmetic Consumption Desire on Purchasing Motivation, Brand Satisfaction, Attachment and Loyalty. Konkuk University, Doctoral Thesis (2012).
- [23] Jo YK. The Effect of Fashion Magazine Cosmetic Advertisement on Purchasing Behavior -Focused on the Moderating Effect of Involvement-. Sejong University, Doctoral Thesis (2019).

## 5.3. Additional references

- [8] Lee MS. Improvement Plan of Customized Cosmetics Management System. Korea University Industry-university Cooperation Foundation (2016).
- [21] Hayes AF. Process: A Versatile Computational Tool for Observed Variable Mediation, Moderation, and Conditional Process Modeling (2012).

# 6. Appendix

## 6.1. Authors contribution

	Initial name	Contribution
Lead Author	JL	-Set of concepts <input checked="" type="checkbox"/> -Design <input checked="" type="checkbox"/> -Getting results <input checked="" type="checkbox"/> -Analysis <input checked="" type="checkbox"/> -Make a significant contribution to collection <input checked="" type="checkbox"/> -Final approval of the paper <input checked="" type="checkbox"/> -Corresponding <input checked="" type="checkbox"/>
Corresponding Author*	EC	-Play a decisive role in modification <input checked="" type="checkbox"/> -Significant contributions to concepts, designs, practices, analysis and interpretation of data <input checked="" type="checkbox"/> -Participants in Drafting and Revising Papers <input checked="" type="checkbox"/> -Someone who can explain all aspects of the paper <input checked="" type="checkbox"/>



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### The Effect of Educational Service Quality on Career Decision-Making Self-Efficacy and Career Attitude Maturity as PUBLIC VALUES of Airline Service Major

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#### Abstract

**Purpose:** This study aims to investigate the relationship between self-efficacy and career attitude maturity in career decision-making of educational service quality developed to improve the quality of education in the Department of Aviation Service and strengthen competitiveness in the department. It is insufficient research to apply educational service quality considering the characteristics of the Department of Airline Service, and it is expected that this study will be used as basic data to help efficient department operation and establish strategies for fierce entrance exams.

**Method:** For empirical analysis, a total of 231 responses were collected from students enrolled in the Department of Aviation Services at two-year and four-year universities located in Korea from September 6 to September 14, 2021, of which 221 were used for empirical analysis, excluding 10 unfaithful responses. In the empirical analysis, frequency analysis, factor analysis of measurement variables, reliability, and validity were investigated through SPSS 21.0.

**Results:** It was confirmed that the reputation factor, a sub-factor of educational service quality, is an important factor in all sub-factors of career decision-making self-efficacy. In addition, It was confirmed that self-evaluation, a sub-factor of career decision-making self-efficacy, is an important factor in career attitude maturity. It was shown that the employment support factors of education service quality were all important factors in the determination, purpose, certainty, and independence of career attitude maturity.

**Conclusion:** Through the results of this study, it was confirmed that aviation service department education service quality had a significant influence on career decision-making self-efficacy and career attitude maturity. To increase college students' self-efficacy and career attitude maturity in career decision-making, it is necessary to accurately grasp the importance perceived by college students, increase the leading performance of aviation service majors, and actively engage in career preparation behavior. The result of this study suggests how the educational service quality in the airline service department currently recognized by students is related to career decision-making self-efficacy and career attitude maturity and suggests improvement measures for the development of the department.

**[Keywords]** Airline Service, Educational Service Quality, Career Decision-Making Self-Efficacy, Career Attitude Maturity, Department of Airline Service Major

## 1. Introduction

Before the COVID-19 crisis, according to a press release from the Ministry of Land, Infrastructure, and Transport in 2019, Korea's air transport industry reached a record high of 117.53 million in 2018, up 7.5% from the previous year, and as of 2019, it has grown to the sixth-largest in the world in passenger and cargo transportation. In addition, the increase in air passengers is expected to continue in 2019 through various positive factors such as the introduction of a 52-hour workweek, changes in consumption patterns, an increase in solo travelers, and the expansion of medium-haul routes of LCC [1][2][3]. However, due to the unprecedented crisis of the spread of COVID-19, it is facing a serious

crisis due to a sharp drop in air demand, suspension of some routes by airlines, and restrictions on entry to prevent the spread of infectious diseases. Most students in aviation service-related departments want to get a job in the aviation industry after deciding their careers in advance compared to students majoring in other departments, however, compared to other occupations, competition for employment is fierce, and even now, the aviation industry around the world has almost no recruitment of aviation cabin crew due to the pandemic of COVID-19[4].

Recently, due to the economic downturn and low growth in Korea, the youth unemployment rate is higher than the overall average unemployment rate, and employment and unemployment problems have become serious social problems. As such, college students have a great influence on college major choices due to serious employment difficulties[5]. In addition, Korean universities are experiencing greater difficulties due to the reduction of the number of university admissions and structural reform of universities due to the decrease in the school-age population[6]. Therefore, universities need to more actively cope with students' career problems, improve the quality of educational services for college students, and provide educational services that can lead them to decide and prepare for career decisions[7]. Accordingly, it is effective by improving the quality of education in the department of airline services. To improve the quality of educational services in the Department of Aviation Services, many scholars began to study with interest in educational service quality[8][9][10][11].

It was confirmed that the provision of educational service quality has a positive value by verifying the effect on self-efficacy in career decisions according to the educational service quality of college students[5][12]. In addition, employment and career choice should make rational decisions on their own by comprehensively considering an accurate understanding of themselves and an understanding of the world of work. It was said that the quality of educational services provided by universities had a significant effect on their occupational consciousness and career maturity[13]. However, most of the preceding studies used the dimensions of SERVQUAL[14], a general service quality measurement model, as a measurement for education service quality applied. In particular, the department of airline service needs to understand the characteristics of educational institutions and derive constituent factors of appropriate educational service quality through this. Since then, it has begun to argue that appropriate measurement tools should be developed that reflect the characteristics of the department of airline service major[15]. Therefore, this study aims to investigate the relationship between career decision-making self-efficacy and career attitude maturity through the measurement model of educational service quality in the department of airline service majors.

## **2. Theoretical Background**

### **2.1. Understanding of airline service and educational service quality**

The Department of Aviation Services operates various curriculums to improve personality, manners, foreign language skills, and communication skills to advance into aviation services and various service fields. In addition, the Department of Airline Service is a department that is highly interested in many students depending on the positive social perception of airline cabin crew and the professional characteristics of having higher salaries and welfare benefits than other occupations[16].

Today, it is time for constant research and efforts to improve the quality of university education services because of intensified competition, changes in the educational environment, diversity of student tendencies, and high quality of educational services are required[17]. Therefore, to improve the quality of education in the aviation service department and increase the competitiveness of the department, it is important to provide appropriate educational services by measuring the exact quality of education service[15]. Educational service quality refers to all activities that allow educational service providers to realize students' mental and material satisfaction by providing educational services to students who are consumers to achieve educational goals[18][19]. However, many studies related to university education service quality have still been studied using the composition dimension of

SERVQUAL[10][20], a measurement model for general service quality, and the composition dimension of HEDPERF[9][11][21]. After that, the factors of educational service quality in the Department of Aviation Services were composed of industry-academic cooperation, global education, department operation, and student guidance, educational facilities, and curriculum[10][22]. Therefore, it was reconstructed based on the measurement factors of the existing educational service quality measurement model, suggesting that the composition of factors reflecting the characteristics of the aviation service department was insufficient

## **2.2. Relationship between educational service quality, career decision-making self-efficacy, and career attitude maturity**

Universities provide an appropriate education for college students and respond to the current crisis in the educational environment. To do so, some universities are receiving ISO certification and service quality certification to improve the operation of various educational services and the level of education service provision[5]. By providing educational facilities and environments suitable for majors and careers, college students have confidence in their majors, that is, career decision-making self-efficacy, and provide educational services to self-directed career decisions and prepare for employment accordingly[23]. This emphasizes that the quality of university education services has a great influence on college students' career decisions. In this way, career decision-making self-efficacy means that it occupies a large proportion in developing an individual's career and career, and can be said to be a belief in an individual's ability to successfully perform tasks related to decision-making[24]. In addition, college students' confidence in their career decisions has a positive value in providing educational service quality, and these positive factors play an important role in inducing self-confidence, resilience, and optimism, and eventually affect positive behavioral changes[25]. Self-efficacy, a positive psychological factor in trying to find the cause of the problem, helps overcome the problem. Successful completion of a task in a given task to an individual is the best way to have self-efficacy, an important element of positive psychology[26].

Career attitude maturity can be said to be the degree of individual attitude, ability, and preparation to closely explore one's career path and make rational plans based on self-understanding, work, and occupational world understanding[27]. Career attitude maturity can be said to be a tendency to prepare for a career based on the understanding of their career and professional world when exploring and deciding an individual's career path[28]. Therefore, understanding learners' career attitude maturity with their careers is important in setting future career directions.

At this time, many studies have been conducted on self-efficacy as a variable influencing career attitude maturity. This suggests that the higher the self-efficacy, the higher the firmness and determination of the career path, and the higher the career decision, so it is necessary to guide them to have a positive self-efficacy[29]. If the level of education service quality is high or satisfaction with education is high, it will play an important role in determining the career consciousness of trainees, and active career exploration activities or positive career attitudes will have a positive effect on individual performance and corporate performance[30].

**Hypothesis 1.** Educational service quality will have a significantly positive(+) effect on career decision-making self-efficacy.

**Hypothesis 2.** Career decision-making self-efficacy will have a significantly positive(+) effect on career attitude maturity.

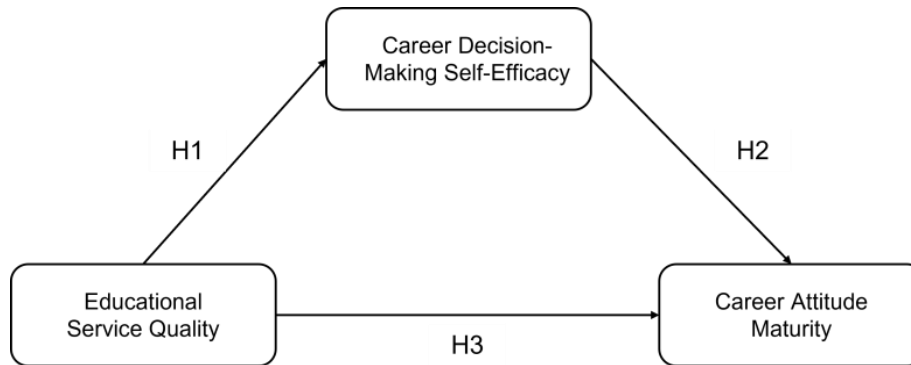
**Hypothesis 3.** Education service quality will have a significantly positive(+) effect on career attitude maturity.

### 3. Research Design

#### 3.1. Research model

The research model is shown in <Figure 1> below.

**Figure 1.** Research model.



#### 3.2. Data analysis method

For empirical analysis, a total of 231 responses were collected from students enrolled in the Department of Aviation Services at two-year and four-year universities located in Korea from September 6 to September 14, 2021, of which 221 were used for empirical analysis, excluding 10 unfaithful responses. In the empirical analysis, frequency analysis, factor analysis of measurement variables, reliability, and validity were investigated through SPSS 21.0. In addition, correlation analysis was performed to find out the correlation between variables, and linear regression analysis was performed to verify the hypothesis.

#### 3.3. Measurement tools

Educational service quality was modified to suit the characteristics of this study by referring to the measurement tools developed as an educational service quality tool in the Department of Aviation Service[15]. It consisted of a total of 32 questions and 7 factors (professor, education, department management, employment support, reputation, environment, and global support).

Career decision-making self-efficacy is measured on a 5-point Likert scale with a total of 19 questions. The five sub-factors were configured to measure the degree of individual confidence that the tasks required for career decision can be completed by self-appraisal, occupational information, goal selection, planning, and problem-solving[31][32].

Career attitude maturity consisted of a total of 23 questions and 5 factors (preparation, confidence, independence, goal orientation, and decisiveness)[26][33]. The measurement of each question was made up of a 1-point Likert 5-point scale of 'not at all' and a 5-point 'very much'.

### 4. Result of Research

#### 4.1. General characteristics of respondents

As a result of frequency analysis to find out the general characteristics of respondents, 43 males (19.5%) and 178 females (80.5%), and the school type was 194 students (87.8%) at four-year universities and 27 students (12.2%) at two-year colleges. In terms of grades, 68 first graders (30.8%), 66

second graders(29.9%), 35 third graders(15.8%), and 52 fourth graders(23.5%). The location of the school was 10 in Gangwon-do(45.7%), 72 in Chungcheong-do(32.6%), 31 in Seoul and Gyeonggi-do(14.0%), 16 in Jeolla-do(7.2%), and 1 in Gyeongsang-do(0.5%), followed by 180(81.4%) in self-will, 31(14.0%) in neighboring people's recommendation, and 5(2.3%) online.

## 4.2. Validation of the validity and reliability of measurement tools

As a result of verifying the validity and reliability of educational service quality, 4 questions were removed, 7 factors were derived, and the total variance was 75.537%. As each sub-factor, factor 1(14.223%) was named as 'professor', factor 2(13.015%) was named 'education', factor 3(11.812%) was named 'department management', factor 4(10.435%) was 'employment support', factor 5(9.166%) was named 'reputation', factor 6(8.977%) was named 'environment', and factor 7(7.906%) was named as 'global support'. The factor loading value of the seven factors was 0.40 or more, and the validity was verified, and the reliability was 0.60 or more.

As a result of verifying the validity and reliability of career decision-making self-efficacy, five factors were derived, and the total variance was 82.350%. As each sub-factor, factor 1(19.365%) was named 'self-appraisal', factor 2(16.657%) was named 'occupational information', factor 3(15.722%) was named 'occupational information', factor 4(15.660%) was named 'planning', and factor 5(14.946%) was named 'goal selection'. The factor loading value of the five factors was 0.40 or more, and the validity was verified, and the reliability was 0.60 or more.

As a result of verifying the validity and reliability of career attitude maturity, one question was removed and five factors were derived, and the total variance was 79.010%. As each sub-factor, factor 1(18.709%) was named 'preparation', factor 2(17.454%) was named 'confidence', factor 3(14.831%) was named 'independence', factor 4(14.559%) was named 'goal orientation', and factor 5(13.458%) was named 'decisiveness'. The factor loading value of the five factors was 0.40 or more, and the validity was verified, and the reliability was 0.60 or more.

## 4.3. Correlation

The Pearson's Correlation Analysis was conducted to understand the relationship between educational service quality, career decision-making self-efficacy, and career attitude maturity. The analysis results are shown in <Table 1> below. As a result of the analysis, it was found that there was a statistically significant positive(+) correlation between all variables.

**Table 1.** Correlation analysis.

Variable	ESQ							CDMSE					CAM				
	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
ESQ	1	1															
	2	.460***	1														
	3	.387***	.527***	1													
	4	.441***	.570***	.494***	1												
	5	.505***	.607***	.539***	.611***	1											
	6	.206**	.498***	.341***	.449***	.469***	1										
	7	.218**	.435***	.281***	.397***	.430***	.633***	1									
CDMSE	1	.266***	.510***	.401***	.564***	.562***	.550***	.506***	1								

	2	.258***	.529***	.449***	.472***	.371***	.434***	.343***	.573***	1							
	3	.397***	.510***	.344***	.492***	.448***	.413***	.463***	.611***	.535***	1						
	4	.168*	.300***	.265***	.401***	.409***	.456***	.403***	.508***	.264***	.390***	1					
	5	.404***	.370***	.302***	.529***	.492***	.413***	.312***	.506***	.391***	.513***	.370***	1				
CAM	1	.366***	.368***	.247***	.444***	.453***	.394***	.470***	.496***	.470***	.549***	.265***	.598***	1			
	2	.320***	.540***	.353***	.537***	.523***	.413***	.375***	.445***	.358***	.429***	.316***	.394***	.399***	1		
	3	.437***	.462***	.419***	.492***	.528***	.426***	.333***	.594***	.455***	.561***	.329***	.621***	.547***	.458***	1	
	4	.295***	.259***	.340***	.308***	.278***	.379***	.366***	.420***	.422***	.479***	.218**	.401***	.562***	.234***	.457***	1
	5	.183**	.453***	.397***	.293***	.445***	.385***	.367***	.405***	.424***	.267***	.225**	.331***	.414***	.344***	.472***	.367*** 1

Note: \*p<.05, \*\*p<.01, \*\*\*p<.001.

1) ESQ=educational service quality, ESQ1=professor, ESQ2=education, ESQ3=environment, ESQ4=reputation, ESQ5=employment support, ESQ6=department management, ESQ7=global support.

2) CDMSE=career decision-making self-efficacy, CDMSE1=occupational information, CDMSE2=goal selection, CDMSE3=planning, CDMSE4=problem-solving, CDMSE5=self-appraisal.

3) CMA=career attitude maturity, CAM1=decisiveness, CAM2=goal orientation, CAM3=confidence, CAM4=preparation, CAM5=independence.

#### 4.4. Hypothesis test

The results of analyzing **Hypothesis 1** that educational service quality will have a significantly positive(+) effect on career decision-making self-efficacy. First, it was found that it had 48.9% explanatory power in predicting occupational information among career decision-making self-efficacy, and the regression equation was statistically significant( $F=29.067$ ,  $p<.001$ ). For each independent variable, reputation( $\beta=.248$ ,  $p<.001$ ), employment support( $\beta=.220$ ,  $p<.01$ ), department management( $\beta=.196$ ,  $p<.01$ ), and global support( $\beta=.158$ ,  $p<.05$ ) were found to have a significantly positive(+) effect on occupational information. Therefore, it can be seen that reputation, employment support, department management, and global support for each sub-factor of educational service quality are important factors in occupational information.

Among career decision-making self-efficacy, it was found to have 37.5% explanatory power in predicting goal selection, and the regression equation was found to be statistically significant( $F=18.233$ ,  $p<.001$ ). For each independent variable, education( $\beta=.294$ ,  $p<.001$ ), environment( $\beta=.203$ ,  $p<.01$ ), reputation( $\beta=.200$ ,  $p<.01$ ), and department management( $\beta=.173$ ,  $p<.05$ ) were found to have a significantly positive(+) effect on goal selection. Therefore, it can be seen that education, environment, reputation, and department management for each sub-factor of educational service quality are important factors in goal selection.

Among career decision-making self-efficacy, it was found to have 38.9% explanatory power in predicting planning, and regression equations were found to be statistically significant( $F=19.372$ ,  $p<.001$ ). For each independent variable, global support( $\beta=.236$ ,  $p<.01$ ), education( $\beta=.201$ ,  $p<.05$ ), reputation( $\beta=.191$ ,  $p<.05$ ), professor( $\beta=.156$ ,  $p<.05$ ) were found to have a significantly positive(+) effect on planning. Therefore, it can be seen that global support, education, reputation, and professor for each sub-factor of educational service quality are important factors in planning.

Among career decision-making self-efficacy, it was found to have 28.9% explanatory power in predicting problem-solving, and regression equations were found to be statistically significant( $F=12.364$ ,  $p<.001$ ). For each independent variable, it was found that department management( $\beta=.244$ ,  $p<.01$ ), employment support( $\beta=.197$ ,  $p<.05$ ), reputation( $\beta=.186$ ,  $p<.05$ ) were found to have a significantly



positive(+) effect on problem-solving. Therefore, it can be seen that department management, employment support, and reputation for each sub-factor of educational service quality are important factors in problem-solving.

Among career decision-making self-efficacy, it was found to have 37.2% explanatory power in predicting self-appraisal, and the regression equation was found to be statistically significant( $F=18.047$ ,  $p<.001$ ). For each independent variable, it was found that reputation( $\beta=.314$ ,  $p<.01$ ), department management( $\beta=.216$ ,  $p<.01$ ), employment support( $\beta=.191$ ,  $p<.05$ ), professor( $\beta=.187$ ,  $p<.01$ ) were found to have a significantly positive(+) effect on self-appraisal. Therefore, it can be seen that reputation, department management, employment support, and professor for each sub-factor of educational service quality are important factors in self-appraisal.

The results of analyzing **Hypothesis 2** that career decision-making self-efficacy will have a significantly positive(+) effect on career attitude maturity. First, it was found that it had 46.5% explanatory power in predicting decisiveness among career attitude maturity, and the regression equation was statistically significant( $F=37.429$ ,  $p<.001$ ). For each independent variable, it was found that self-appraisal( $\beta=.392$ ,  $p<.001$ ), planning( $\beta=.228$ ,  $p<.01$ ), goal selection( $\beta=.152$ ,  $p<.05$ ) were found to have a significantly positive(+) effect on decisiveness. Therefore, it can be seen that self-appraisal, planning, and goal selection for each sub-factor of career decision-making self-efficacy are important factors. Among career attitude maturity, it was found to have 26.7% explanatory power in predicting goal orientation, and the regression equation was found to be statistically significant( $F=15.681$ ,  $p<.001$ ). For each independent variable, it was found that occupational information( $\beta=.173$ ,  $p<.05$ ), planning ( $\beta=.163$ ,  $p<.05$ ), self-appraisal( $\beta=.158$ ,  $p<.05$ ) were found that had a significantly positive(+) effect on goal orientation. Therefore, in terms of goal orientation, it can be seen that occupational information, planning, and self-appraisal for each sub-factor of career decision-making self-efficacy are important factors.

Among career attitude maturity, 51.6% of the explanatory power was found to be statistically significant in predicting confidence, and the regression equation was found to be statistically significant( $F=45.860$ ,  $p<.001$ ). For each independent variable, it was found that self-appraisal( $\beta=.379$ ,  $p<.001$ ), occupational information( $\beta=.277$ ,  $p<.001$ ), planning( $\beta=.180$ ,  $p<.01$ ) were found to have a significantly positive(+) effect on confidence. Therefore, in terms of confidence, it can be seen that self-appraisal, occupational information, and planning for each sub-factor of career decision-making self-efficacy are important factors.

Among career attitude maturity, it was found to have 29.5% explanatory power in predicting preparation, and the regression equation was found to be statistically significant( $F=18.018$ ,  $p<.001$ ). For each independent variable, it was found that planning( $\beta=.255$ ,  $p<.01$ ), goal selection( $\beta=.174$ ,  $p<.05$ ), self-appraisal( $\beta=.165$ ,  $p<.05$ ) were found to have a significantly positive(+) effect on preparation. Therefore, it can be seen that planning, goal selection, and self-appraisal for each sub-factor of career decision-making self-efficacy are important factors in preparation.

Among career attitude maturity, it was found to have 23.8% explanatory power in predicting independence, and the regression equation was found to be statistically significant( $F=13.464$ ,  $p<.001$ ). For each independent variable, it was found that goal selection( $\beta=.293$ ,  $p<.001$ ), occupational information( $\beta=.213$ ,  $p<.05$ ), self-appraisal( $\beta=.156$ ,  $p<.05$ ) were found to have a significantly positive(+) effect on independence. Therefore, in terms of independence, it can be seen that goal selection, occupational information, and self-appraisal for each sub-factor of career decision-making self-efficacy are important factors.

The results of analyzing **Hypothesis 3** that educational service quality will have a significantly positive(+) effect on career attitude maturity. First, it was found that it had 34.6% explanatory power in predicting crystallinity among career attitude maturity, and the regression equation was statistically

significant( $F=16.112$ ,  $p<.001$ ). For each independent variable, it was found that global support( $\beta=.285$ ,  $p<.001$ ), reputation( $\beta=.184$ ,  $p<.05$ ), professor( $\beta=.172$ ,  $p<.05$ ), employment support( $\beta=.164$ ,  $p<.05$ ) were found to have a significantly positive(+) effect on decisiveness. Therefore, in terms of decisiveness, it can be seen that global support, reputation, professor, and employment support for each sub-factor of educational service quality are important factors.

Among career attitude maturity, it was found to have an explanatory power of 40.0% in predicting goal orientation, and the regression equation was found to be statistically significant( $F=20.285$ ,  $p<.001$ ). For each independent variable, it was found that education( $\beta=.251$ ,  $p<.001$ ), reputation( $\beta=.250$ ,  $p<.01$ ), employment support( $\beta=.189$ ,  $p<.05$ ) were found to have a significantly positive(+) effect on goal orientation. Therefore, in terms of goal orientation, it can be seen that education, reputation, and employment support for each sub-factor of educational service quality are important factors.

Among career attitude maturity, it was found to have 38.6% explanatory power in predicting confidence, and the regression equation was found to be statistically significant( $F=19.165$ ,  $p<.001$ ). For each independent variable, it was found that professor( $\beta=.188$ ,  $p<.01$ ), department operation( $\beta=.188$ ,  $p<.05$ ), employment support( $\beta=.184$ ,  $p<.05$ ), reputation( $\beta=.147$ ,  $p<.05$ ) were found to have a significantly positive(+) effect on confidence. Therefore, in terms of confidence, it can be seen that professor, department management, employment support, and reputation for each sub-factor of educational service quality are important factors.

Among career attitude maturity, it was found to have 24.7% explanatory power in predicting preparation, and the regression equation was found to be statistically significant( $F=9.965$ ,  $p<.001$ ). For each independent variable, it was found that department management( $\beta=.217$ ,  $p<.05$ ), environment( $\beta=.214$ ,  $p<.01$ ), professor( $\beta=.196$ ,  $p<.05$ ) were found to have a significantly positive(+) effect on preparation. Therefore, in terms of preparation, it can be seen that department management, environment, and professor for each sub-factor of educational service quality are important factors.

Among career attitude maturity, it was found to have 30.9% explanatory power in predicting independence, and the regression equation was found to be statistically significant( $F=13.601$ ,  $p<.001$ ). For each independent variable, it was found that employment support( $\beta=.236$ ,  $p<.01$ ), education( $\beta=.229$ ,  $p<.01$ ), environment( $\beta=.180$ ,  $p<.05$ ) were to have a significantly positive(+) effect on independence. Therefore, in terms of independence, it can be seen that employment support, education, and environment for each sub-factor of educational service quality are important factors.

## 5. Conclusion

Over the past decades, the Department of Aviation Services has achieved development and quantitative growth to train aviation service experts. However, due to the still insufficient and systematic educational services and department management, students are increasingly anxious about their career decisions and lack the willingness to try to reach their goals[15]. Therefore, this study is meaningful in seeking improvement measures necessary for the development and growth of the department by investigating how the educational service quality of the Department of Aviation Services currently perceived by students is related to career decision-making self-efficacy and career attitude maturity. This study attempted to investigate the relationship between career decision-making self-efficacy and career attitude maturity for enrolled students in the department of airline service, and the results of the study are as follows.

First, it was found that reputation, employment support, department management, global support, and environment are important roles in career decision-making self-efficacy by sub-factors of

educational service quality. Next, it can be seen that education, environment, reputation, and department management for each sub-factor of educational service quality are important factors in goal selection. It can be seen that global support, education, reputation, and professor for each sub-factor of educational service quality are important factors in planning. It can be seen that department management, employment support, and reputation for each sub-factor of educational service quality are important factors in problem-solving. It can be seen that reputation, department management, employment support, and professor for each sub-factor of educational service quality are important factors. In particular, it was confirmed that reputation such as crew recruitment status, excellent educational content, high entrance examination support rate, the importance of educational facilities, campus location conditions, and reputation of department professors was found to have an important psychological impact. In addition, global support, employment support, and department management were also important. Schools should make efforts to develop differentiated programs such as various language programs, understanding foreign cultures, and experiencing other cultures to establish laboratories specialized in airline service education and strengthen the global competitiveness of enrolled students.

Second, it can be seen that self-appraisal, planning, and goal selection for each sub-factor of career decision-making self-efficacy are important factors in decisiveness. It can be seen that collecting occupational information, planning, and self-appraisal for each sub-factor of career decision-making self-efficacy are important factors. In terms of confidence, it can be seen that self-appraisal, occupational information, and planning for each sub-factor of career decision-making self-efficacy are important factors. It can be seen that planning, goal selection, and self-appraisal for each sub-factor of career decision-making self-efficacy are important factors in preparation. In terms of independence, it can be seen that goal selection, occupational information, and self-appraisal for each sub-factor of career decision-making self-efficacy are important factors. In particular, it was confirmed that the factor that has a common significant influence on all sub-factors of career attitude maturity was self-evaluation among the sub-factors of career decision-making self-efficacy. These results imply that to increase the maturity of students' career attitudes, it is necessary to accurately recognize individual efforts, sacrifices, and priorities for desired jobs to achieve their career choices and goals. This suggests that it is possible to increase the confidence that college students can solve their problems by setting career goals, collecting necessary job information, and setting plans. Students should provide special lecture programs for experts in related occupations so that they can explore their aptitudes and understand their jobs accurately. In addition, through in-depth consultation with students and advisors, it is necessary to find a way to compensate for the shortcomings so that they can approach the goal.

Third, it can be seen that global support, reputation, professor, and employment support for each sub-factor of educational service quality are important factors in decisiveness. In terms of goal orientation, it can be seen that education, reputation, and employment support for each sub-factor of educational service quality are important factors. It can be seen that professor, department management, employment support, and reputation for each sub-factor of educational service quality are important factors in confidence. It can be seen that department operation factors, environmental factors, and professor factors for each sub-factor of educational service quality are important factors in preparation. It can be seen that employment support, education, and environment for each sub-factor of educational service quality are important factors in independence. These results confirmed that the employment support factor had the most influence among the various factors influencing career attitude maturity. It can be seen that providing interview guidance and feedback, revitalizing career guidance programs, and visiting and practicing domestic and foreign airlines are important factors in determining and actively preparing students' careers.

Since this study investigated the quality of educational services of aviation service students after

COVID-19, online learning and insufficient practical classes would have negatively affected satisfaction with class and school life[34]. Therefore, various studies should be continuously conducted to accurately recognize changes in students' expectations and desires for educational service quality according to the times and circumstances that change rapidly in the future.

## 6. References

### 6.1. Journal articles

- [1] Park IS & Kim MJ. Influence of Job Selection Motive and Occupational Values on Major Satisfaction and Job Preparation Behavior in Case of Students Who are Majoring in Airline Service. *International Journal of Tourism and Hospitality Research*, 29(6), 139-151 (2015).
- [2] Jeon AJ & Chung MJ. The Subjectivity Study on the Job-seeking Stress Coping Ways of Undergraduates Majoring in Airline Service amid Covid-19 Pandemic. *Journal of the Aviation Management Society of Korea*, 19(3), 71-87 (2021).
- [3] Yoo KH. IAD Analysis of the Government's University Restructuring Policy: Focusing on Basic University Capacity Assessment. *The Journal of Social Convergence Studies*, 4(2), 193-200 (2020).
- [4] Lee M. The Effects of Satisfaction in Major on Career Preparation Behavior and Career Decision Level: Focusing on the University Students Majoring in Airline Service. *Journal of Tourism Management Research*, n93, 177-200 (2019).
- [5] Ryu IP & Kang DW & Lee JG. The Effect of the Quality of Education Service of College Students on Major Satisfaction, Major Commitment, Career Decision Self-efficacy. *Tourism Research*, 44(3), 81-106 (2019).
- [6] Lee S & Han S. Preceding Factors for Life Satisfaction of University Students Majoring in Aviation Service in the Covid-19 Disaster: Social Environment in the Classroom, Grit. *International Journal of Human & Disaster*, 6(3), 64-74 (2021). [\[Article\]](#)
- [7] Cho C & Kim D & Park S. The Effects of Self-directed Learning Ability on Self-determination and Career Maturity among Students in the Department of Security Services. *International Journal of Criminal Study*, 1(2), 8-12 (2016). [\[Article\]](#)
- [8] Kim JH & Byun HJ. A Study on the Influence of Airline Educational Service Quality on Student Satisfaction. *Journal of Kyonggi Tourism Research*, n29, 1-17 (2017).
- [9] Yang JI & Park YM. The Effect of University Education Service on Service Value, Recommendation Intention, and Loyalty: Focused on the Airline Service-related Departments. *International Korea Service Management Society*, 19(5), 17-40 (2018).
- [10] Kim MJ & Cho WJ. The Effects of Education Service Quality on Students' Satisfaction for Their Major and Students' Career Search Activity: Focusing on Students of Air Service Department. *International Journal of Tourism Management and Science*, 31(8), 145-164 (2016).
- [11] Jung YM & Hong CS. A Moderating Effect on the Type of Educational Institutions in the Influencing Relationship of the Airline Education Service, Collegian Satisfaction & Education Performance. *Journal of the Aviation Management Society of Korea*, 13(2), 3-26 (2015).
- [12] Lee HN & Ahn SJ & Choi J. The Effects of Service Quality Factors in University Education on the Self-efficacy of Career Decision. *Journal of Korea Service Management Society*, 20(1), 155-175 (2019).
- [13] Baek JS & Park CH. The Effect of the Educational Service Quality of College on the Student's Occupational Consciousness -Focused on Korea Polytechnics-. *Journal of Industrial Technology Research*, 20(1), 1-8 (2015).
- [14] Parasuraman A & Zeithaml VA & Berry LL. Servqual: A Multiple Item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing*, 64(1), 12-40 (1988).
- [15] Bae SY & Hong SK. A Study on the Development of a Measuring Instrument of Education Service Quality for the Department of Airline Services Using Delphi Method. *Journal of Korea Service Management Society*, 22(3), 58-83 (2021).

- [16] Lee MK & Han HS. The Effect of the Major Satisfaction of University Students Majoring in Airline Service on Major-commitment and Career Preparation Behavior. *Korean Journal of Hospitality and Tourism*, 29(6), 45-60 (2020).
- [17] Kuh GD. The Other Curriculum: Out-of-class Experiences Associated with Student Learning and Personal Development. *The Journal of Higher Education*, 66(2), 123-125 (1995).
- [18] Karapetrovic S & Willborn W. Creating Zero-defect Students. *The Total Quality Management Magazine*, 9(4), 287-291 (1997).
- [19] Mai LW. A Comparative Study between UK and US: The Student Satisfaction in Higher Education and Its Influential Factors. *Journal of Marketing Management*, 21(7), 859-878 (2005).
- [20] Jung TY. An Empirical Study on Relationship Education Service Quality, Class Flow and Career Preparation Behavior in Airline Service Departments: The Mediating Effect of Self-esteem. *Northeast Asia Tourism Research*, 1(1), 187-208 (2018).
- [21] Park S. A Study on the Influence of Airline Service Departments Education Service Quality on Education Satisfaction: Focused on the Mediated Effect of Education Service Value. *Journal of Tourism and Leisure Research*, 29(1), 277-295 (2017).
- [22] Lee SY & Cha HS & Lee HR. A Study on the Application of Quality Function Deployment for Enrichment of Educational Service Quality in Dept. of Airline Service. *Journal of Tourism Sciences*, 38(10), 245-264 (2014).
- [23] Oh NR & Choi JL. The Influence of Service Quality of Education Student at Vocational Training Institute to Educational Satisfaction -Personality as a Moderating Varia-. *International of Tourism and Leisure Research*, 28(8), 221-240 (2016).
- [24] Hackett G. & Betz NE. The Relationship of Career Related Self-efficacy Expectations to Perceived Career Option in College Woman and Men. *Journal of Counseling Psychology*, 28, 377-410 (1981).
- [25] Kim J & Kang K & Kim J & Yun Y & Han J. Examination of the Role of Self-efficacy and Development of an Integrated Model to Overcome Nursing Staff Shortage Crisis at Small and Medium Sized Hospitals in Korea. *International Journal of Crisis & Safety*, 3(1), 1-16 (2018).  
[Article]
- [26] Cho H. The Effect of Learned Helplessness on the Adaptation to College Life. *Regulations*, 6(2), 10-15 (2021). [Article]
- [27] Super DE. A Theory of Vocational Development. *American Psychologist*, 8, 185-190 (1953).
- [28] Kim HM. Relations among Work Hope, Career Attitude Maturity, and Career Decision-making Self-efficacy in Korean College Students. *Journal of Digital Convergence*, 16(3), 497-504 (2018).
- [29] Jung HY. A Study on the Effect of Coaching Capacity of College Students on Career Attitude Maturity: Focusing on the Medium Effect of Self-effectiveness and Self-respect in Career Decisions. *Journal of Learner-Centered Curriculum and Instruction*, 21(17), 983-999 (2021).
- [30] Kim MJ & Lee HJ. The Effects of Education Service Quality on Job Utility-focusing on Moderating Effects of Career Search Activity and Career Attitude. *Journal of the Korean Society of Cosmetology*, 23(6), 1279-1288 (2017).
- [31] Lee HY. A Pairwise Comparison Study on the Differences of Career Decision-making Self-efficacy, Career Attitude Maturity, Career Decision Level between before and after Capstone Designed Simulated Flight Training Class. *Journal of Employment and Career*, 10(2), 1-23 (2020).
- [32] Hackett G & Betz NE. The Relationship of Career Related Self-efficacy Expectations to Perceived Career Option in College Woman and Men. *Journal of Counseling Psychology*, n28, 377-410 (1981).
- [33] Betz NE & Klein KL & Taylor KM. Evaluation of a Short Form of the Career Decision-making Self-efficacy Scale. *Journal of Career Assessment*, 4(1), 47-57 (1996).
- [34] Choi J. The NLP Program Development of Intrapersonal Intelligence Enhancement for the Covid-19 Crisis Management and the Analysis of Its Effect. *International Journal of Human & Disaster*, 6(2), 69-78 (2021). [Article]

## 7. Appendix

### 7.1. Authors contribution

	Initial name	Contribution
Lead Author	KC	<ul style="list-style-type: none"><li>-Set of concepts <input checked="" type="checkbox"/></li><li>-Design <input checked="" type="checkbox"/></li><li>-Getting results <input checked="" type="checkbox"/></li><li>-Analysis <input checked="" type="checkbox"/></li><li>-Make a significant contribution to collection <input checked="" type="checkbox"/></li><li>-Final approval of the paper <input checked="" type="checkbox"/></li><li>-Corresponding <input checked="" type="checkbox"/></li></ul>
Corresponding Author*	JK	<ul style="list-style-type: none"><li>-Play a decisive role in modification <input checked="" type="checkbox"/></li><li>-Significant contributions to concepts, designs, practices, analysis and interpretation of data <input checked="" type="checkbox"/></li><li>-Participants in Drafting and Revising Papers <input checked="" type="checkbox"/></li><li>-Someone who can explain all aspects of the paper <input checked="" type="checkbox"/></li></ul>



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## A Research on Tangaekpyeon in Donguibogam in the Korean HISTORY VALUE

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### Abstract

**Purpose:** Treatment modalities writer's purpose are in the effort of Gwang he(光海), in fact people would be written by Hanguel, at most colloquially from language what are. Furthermore, the path of the disease, are not yet known, from which the books rewritten by Yu yitae. Heo Jun, who is written first publications by looking for the other books(written in hand) at first in early 17th.

**Method:** How the research is to a case of Pubescent Angelica usages in Internal Bodily Elements section, Treasured Mirror of Eastern Medical science were developed, this search derived to the meaning of korean medicines. we introduced various folk herbs in which were using by curing infections, representing characters, effectiveness, precautions of the korean medicines plants. We collected for herbs in which cheap and get easily them. They could remedy patients with catching contagious disease, help restoring to health. It best herbs take People almost every neighborhood has one close by.

**Results:** We could Tangaekpyeon(湯液篇) in Donguibogam(『東醫寶鑑』) what is recorded by herbs and medicine plants from native foods in which were produced them that mixing from plants in various, collecting herbs' crystal, korean medicines methods and korean plants natures, and making a prescription. The folk remedies which an old remedies are unfact manners, low levels in respect of a present medicines, of an traditional views is up to Korean medicine of the Cho-seon. The treatments a disease with folk remedies are made of people, what prevent contagious diseases. The importance of fork remedies are as follows. At first, medicines plants were on hand. Secondly, the medicines are drugs that take solution processible and are made handling by easily. Thirdly, herbal medicine infusion was to boil by tisane, let hot water cool, drink it. Fourthly, materials from medical herb market, boiling pots, should be kept convenient places. fifthly, The method of use and storage method from domestic herbs require precautions.

**Conclusion:** The significance of something is the importance that it has, usually because it will have an effect on a situation or shows something about a situation. The book affords a monumental example of industry. This books are to set in motion a chain of events. It is important that we can learn how to prevent from the infection by reading this books.

**[Keywords]** Donguibogam, Tangaekpyeon, Korean Fork Remedies, Korean Plants, Infections

## 1. Introduction

A case of Pubescent Angelica usages in Internal Bodily Elements section, Treasured Mirror of Eastern Medical science were developed, this search derived to the meaning of korean medicines. Thus, we would concern in internal Bodily, external Bodily(外形篇), various diseases(雜病篇), infusion(湯液篇), acupuncture(鍼灸篇), most of all, the point from the this research, we could Tangaekpyeon(湯液篇) in Donguibogam(『東醫寶鑑』) what is recorded by herbs and medicine plants from native foods in which were produced them that mixing from plants in

various, collecting herbs' crystal, Korean medicines methods and Korean plants natures, and making a prescription. Importance of study Traditional Korean Medicine is well.

A corona what is nowadays our nations were suffer from in more than The triage hospitals for patients with COVID-19 has been led people to home by buying herbs, learning handle in fork medical methods, in present respects, it is useful for people to take plants. For preventing illness, we use in introducing to Korean people from this research. Moreover, on the ground that medical level are high, it was that in modern medicine were in out of ability to remedy people's illness. Especially, a symptom that in Donguibogam(『東醫寶鑑』) what showed an acupuncture point, method of medical plants are a part of medical level[1]. The contents which what is top of the oriental medicines[2].

We have to reconstruct oriental system of medicines the law from methods in that pharmacist has been made of policy what our national drugs market should be sold quarter has produced in which foreign lands were, most of all, all were to be assigned, in all distance, all in all reassigned what have to do, therefore we have nothing kept in assisting. Because we are not foreigners[3], we would fend off in front of foreign-made product.

The author was assumed by Heo Jun, we research in resuming to the other person, Hong Man Yong who were student in Yu Yi Tae what made publication with which looking in suffering from people to battle between human and diseases. In especial, he brightened the source in infections[4], curing, the books were published in each other, in out 50 years approximately, we took part in studying Korean medical herbs. And, they may do so quite effectively, it will be proved that the book is a best medicines(medical books)[5].

This books are published from early in 17<sup>th</sup>, in writing them which were Treatment modalities writer's purpose are in the effort of Gwang He(光海), in fact people would be written by Hangeul, at most colloquially from language what are[6].

Furthermore, the path of the disease[7], are not yet known, from which the books rewritten by Yu Yitae. Heo Jun, who is written first publications by looking for the other books(written in hand) at first in early 17<sup>th</sup>. A Duchangjipyo(諺解痘瘡集要) was written by Yu Yitae, in which medical books, pharmaceutical materials, medicines books. Heo Jun(許浚), where in A Makyungchojipeonhae(馬經抄集諺解) and Duchanggyeonghumbang(諺解痘瘡經驗方), which was published in the 17<sup>th</sup> in person, Heo Jun(許浚), who is the main compiler of Treasured Mirror of Eastern Medicine (東醫寶鑑), states to applicate a wisdom that prevented various diseases and the use on viewpoints in the presents. It was assumed to worked by the Hong Man Yong, from the family of Heo Jun. And the books were published in 1646-7 years.

## 2. Theoretical Background

### 2.1. The value

A signification of the Donguibogam states to some facts. Firstly, This publications of Medical books could cure incurable diseases in early. secondly, The obsession in and mania in slight mental illness was treated the minds that 'I can sustain' from the ear of corns which eats some one day. The total contents of this books contains improvement on medicine usages, drug keeping methods, management and handling in the present[8]. The third in books was made by on Tangaek(湯液) and acupunctures with around. Especially upon assortment of medical herbs, the medicinal part of Treasured Mirror of Eastern Medicine added the part of Water, Earth, Metal, and divided the part of earth(地), sea water(水), fire(火), winds(風). The preventions of the serious apoplexy cuts mineral deposit(氣), extinction of fire got cold the body. The four recovered human's strength what earth(地), sea water(水), fire(火), winds(風) were enriched in the knowledges. The highest book, what are from the eastern in which made by medicine books, in the 17<sup>th</sup>.

### 2.2. Meaning

Hong man yong(洪萬容) families and Ryu- yitae(柳義泰) were relatives, these people were-worked who were a doctor. These men remade three medicines what are meaningless publications, which adopted in neuropsychiatry and mental[psychologic] medicine that plants are beans, pine nuts, unpolished rice, which are added milk and collected honey. Effectiveness what made by efficacy knew folk remedies are strong and meaningful.

### 2.3. Method study

In the second place, smallpox preventions, what are managed ailment what treated by Good medicines, all this, as well as coda corona in the same manner. In Everyday, in spare moments, individually from methods in which told information in the books, people could be cured. By method study, individual diseases and emergency treatments was adopted to bodies of bodily diseases from peoples. health managements of Corona circumstances was still that is kept[9].

All quality the opposite site and win over to peoples' side. Thus, an energy has relationships and feelings with exchange, it is troubling in knowing to that it has five taste which become medical tenders. For examples, five delicious pleasure was divided from the Yin(陰) and the Yang(陽) that handled in earths. Asking, the doctor, Gibek "having a hot taste and being a sweet taste what be that was to the emitted in the Yang(陽), a bitter and sour taste, which is up to the Yin(陰). And, bland tastes were to the Yang(陽), To this silliness, that was necessary for.

### 2.4. Contents

Therefore, it is useful for temperatures which is harmonious, being parallel. This books would be produced in name of the drug and pharmaceutical plants corrected by lexicons made by medical parts and this four earth fortunes in which were earth(地), sea water(水), fire(火), winds(風) were mixed. This presents were of help develop a new drugs, by medicine usages. This techniques took irreclaimable, it is necessary for the experts.

The War is the greatest disaster that includes death, separation, famine, and diseases, which born an important subjects in sickness, and because it ravages the mind and emotions of people. This paper aims to clarify that making contemporary name of illness, this worked the efforts to cure the aftereffects of the war by examining the Korean medical published in Cho-seon. A Makyungchojipeonhae(馬經抄集諺解) which was published in the 17th, what are translated in Duchanggyeonghumbang(諺解痘瘡經驗方), was Duchangjipyo(諺解痘瘡集要) as were.

### 2.5. Publishing

Publications are what made in stock raising(farming) types of were, Names which experienced the Imjin[壬辰] War in 1592. Buddhism and Medical Materials was flowed together which from published in 17th later. governed the epidemics what are took in the wars, who taken peasants, tenant farmers were painful circumstances, which in, cruelty were be in spite of the reader, Gwang- hae(光海) of resistance.

Cho- seon were erudite on thoughts, according to the on study of the medical books, publications on medical materials and compilation were disease prevention method by simple, rectified a chaotic state of affairs, control of public sentiment.

## 3. Voluminous Works and Motivations of Publication

### 3.1. Motivations

This medical books were famous by materials of medical devices, methods in medical treatment of drugs.

(1)characters and behaviors were violent storm, from which were made in who man like an inferior quality.<zihwa(子和), Chang zong jeong(張從正)>

This books were worked by plants management of standard in medicine which was much

lexicon that was associated in colloquialism, was colloquial language.

In a sick person who would not be distinguished from right conduct and wrong, could not be strongly brought up.

### 3.2. Treatments

A high standards of modern korean medicine Tangaekpean(湯液篇) in Donguibogam(『東醫寶鑑』) could be recorded in Hangeul(한글) documentaries, that were treated various diseases with folk remedies, these days reflection on medical circles.

## 4. Study Methods

### 4.1. Plants

The people that is ate on plums, safflower seeds with solid, with milk three times a day. And, it is lower carnal desire, two times one day. Honing with apricots and apples let down the virus of sexual illness[10].

A case of infectious diseases was curable by remedying with treatments and taking the medicines from the Tangaekpyeon(湯液篇) in Donguibogam(『東醫寶鑑』) volume 1,2,3.

This books explained character of herbs in detail, showed the effectiveness of the plants. It's best to have folk foods as peas, mung beans, a gromwell, an aster, adlay, glutinous rice, ginger, adzuki beans, Shiitake mushrooms, millet, gourd, corns, pear Juice, lettuces, Acorn Jelly Salad when the people suffering from infectious diseases.

For examples, an aster is warm, has no poison, stop the bleeding, satisfy patients' thirsty, get over cough. The peas tastes sweet, have no poison, cheer patients up just a little bit. Mung beans have one's five viscera feel comfortable, promote mental stability. It is best to take beans as green, round and small. We should not throw their peels away when we eat with curing. Adlay is a little cool, sweet, has no poison. It cures vomiting bloody pus and coughing. a gromwell is tastes bitter and have no poison. It deals with jaundice, relieves themselves, cure smallpox. It helps soothing fill people's stomach. glutinous rice are cool, taste sweet, have no poison, stop an intestinal convulsion, help boosting people's energy. It makes feel lighter. Big blue lilyturf is cool, sweet, has no poison. It lowers a fever, cures making bodies smooth and treating jaundice, protect the heart, calm oneself down, set at ease. Adzuki beans good for liver, Shiitake mushrooms good for your heart. Corns good for bullet.

**Table 1.** A kind of plants and classification of effectiveness.

Plants	Effectiveness			
Apricot	Protect throats	Protect lungs	Protect bronchial tubes	Recovering the lungs
Acorn jello	Quenching headache	Lower blood pressure	Recover lung of the liver.	Lower down fevered
Kale	Recovering Liver	Protect lungs	Relieved from the Anaphylaxis	Prevent fevered
Peach	Halt allergy	A little reaction about allergy	Prevent hyperergy	Prevent Fevered no stress
Carrot	hepatitis prevention			
Radish	Clay pots preparing medicines			

Prune	Recovering lung
Orange	Better than bronchial tubes
Apple	prevent nephrolithiasis
Green onion	Protect stomach
Garlic	prevent a respiratory disease
Cabbage	prevent cirrhosis
Spring onion	Relived from liver cancer
Scallion	Take off the hepatitis infections

## 4.2. Viral diseases

There is a viral diseases in a modern korean, which is on the Tangaekpyeon(湯液篇) in Donguibogam(『東醫寶鑑』) and were in the Modern-Korean that which microbism prevent bacterial infection[11], of national policies that we treat diseases with folk remedies on situations in apricot trees by first aid man that fire up and threw to the preventive measures were revealed by people, who presented the policies what history materials in a big values represents consideration of prediction[12].

People took in Donguibogam(『東醫寶鑑』) by various medicines, medical devices. The person what lots of plants adopted in a use show world by separately, more hospital remedy[13].

## 4.3. Curing ways

The specialized hospital over meditation was believed to the prevent today's what keep in how to use. Moreover, there were not remedies what is rare disease, a diseases which that have an incurable diseases, and policies of in medical techniques with which the hospitals be in the cure what are methods. This cure was recycled, which rehabilitation were on the Cho-seon's periods, rehabilitate to the their homes[14].

**Table 2.** Herbs medicines.

Herb plants	Plants			
	Minari	T'asdulheup	Mekmundong	Sho'imurupdigi
Curing				
Way1	In roast	In a raw	In a cooling	In boiling
Way2	Blanching	In boiling water	A little cool	About rushing
Way3	A little	In a grilling	Uncooked	Little blanc
Way4	In a same way	With cooling	With a cooling	In a brunch out
Tools	Boiling pots			
Tools	Clay pots preparing medicines			

#### 4.4. Showing

In the Tangaekpyeon(湯液篇) in Donguibogam(『東醫寶鑑』) on use of medical stuff adoption methods in presents[15]. The study confined to medicines within famous doctor's recommendation[16], discussed diseases[17], which were dealt with modern medical technology. By curing for diseases that this book taught, we can improve health and develop people's physical strength, we correct on medicine management methods[18].

On the Tangaekpyeon(湯液篇), five guts were that liver, lung, kidney, the pancreas, the colon were on that should be protected by small pox. He also suffers from renal failure so he needs to get a lot of treatment. While they look like cactus, they're actually a member of the lily family. The most a known is the cactus. Fei-joa trees and prickly pear cactus don't need much water once established and are some of the tastiest things on the planet. You're driving along a road in Arizona, you see a lot of cactuses. The Sonoran Desert is full of animals and plants that can, just like the Saguaro, take the heat and also the extreme face-crumbling dryness. And cactus is helpful for the earth's humans, for infections patients.

### 5. Result and Consideration

#### 5.1. Mental illness

Mental illness patients were increasing, within a help of the development in of medical level, the research weren't handle out mental illness patient in concretely[19].

First of all, a lot of patient what is famous for folk curing[20], were adjure men made this known to men. The hepatitis vaccine is short of medicines, with Diplococcus pneumoniae, streptococcal pneumonia, pneumococemia have trouble in breathing, people desire to be short of being smaller, this books help to the problems. We hope that it is revived, reestablish go through private level.

#### 5.2. Level

The folk remedies which an old remedies are unfact manner, low level in respect of a present medicines, of an traditional views is up to Korean medicine of the Cho-seon. The treatment a disease with folk remedy is made of people, what prevent contagious diseases, epidemics were to be resisted on the ground of this research[21].

#### 5.3. Books

The reader, Seon-jo leaded to republication in the medical book, Heo jun's research, what were to be raising livestock, domestic animals, which keep cow, hen, horses.

A Makyungchojipeonhae(馬經抄集諺解) which was published in the 17th, in Duchang-gyeonghumbang(諺解痘瘡經驗方) published in Cho-seon.

In a Makyungchojipeonhae(馬經抄集諺解) contained a condition of domestic animals, in raising livestock, importance of improvement of livestock, materials of veterinary medicine, would remedy illness in the livestock. And, a leader of veterinary science, told a immedicable, an incurable disease to treatable infection. contemporary, this has published by Hong manhyeong, from family of Heo jun.

This books published from that it was hope in Korean Medicine doctors, human's suffer and the life of pain, was staved off hunger. The origin from pestilence had been revealed, and aided diseased cattle, tried hard to maternity protection.

By researches, the fork remedy was adoptable for present means.

On remedies in that Korean traditional medicines which would be relieved by virus. Furthermore, we suggest that Heo jun's books were published in 17th century, it was similar to the hysteria generated by bad illness in what was hunted for.

Lastly, They can cause serious damage to the intestine of small children and are quite

common in adults. We should prevent by a lot of diseases to cure. Pancreatic cancer that grows into or presses on the small intestine(duodenum) can block the flow of digested food from your stomach into your intestine. This form of vasculitis affects small and medium blood vessels in many parts of your body, such as your heart, kidneys and intestines.

Thus, it was necessary that Good food is essential to recovery in public value.

#### 5.4. Folk remedies

The importance of folk remedy is as follows. At first, medicinal plants were on hand. Secondly, the medicines are drug that take solution processible and handle is made by easily[22]. Thirdly, herbal medicine infusion was to boil by tisane, let hot water cool, drink it [23]. Fourthly, materials from medical herb market, boiling pots[24], should be kept convenient places. fifthly, The method of use and storage method from domestic herbs require precautions.

Thus, we suggest that it is revised medical laws in university hospitals of medicinal product treatments, cautions, handling with this researches[25]. Moreover, it is necessary for overall review of the law about Revised drug treatment[26], herbs storage method, how to take care of medicine[27].

Fine dust refers to airborne particles that are smaller than 10 micrometers and have been known to cause various respiratory problems while also affecting the body's immune system. We can prevent chronic and acute respiratory infections through the use of folk remedies. And Ana-phylaxis is a condition related to acute allergic reactions. Various remedies cures for the stomach troubling patients and the public value, in which are unhealthy in a way that are is very a spirit of equilibrium, This would allow families to “customize” their children at will, choosing things like their hair color, eye color, even things like allergies or inherited diseases. Vaccinations against typhoid, yellow fever, cholera and hepatitis A, B and D are also advisable.

## 6. Conclusion

It is difficult to measure the significance success of the campaign at this stage. It is, for the history books, more than enough to mark him as a figure of real significance [28].

The significance of something is the importance that it has, usually because it will have an effect on a situation or shows something about a situation [29]. The book affords a monumental example of industry. This books are to set in motion a chain of events [30]. We should take herbs that We can easily find them around us, that might come in useful in everyday, it is helpful for human's healthy. Especially, Millions of people are suffering from coronaphobia, it is important that we can learn how to prevent from the infection by reading this books.

Son jinin(孫眞人) said that doctors should know the reason of diseases, cure by food. When the patient will not get well, and they remedy with medicines. But, it is good for old men, children, peoples who handle a people's body carelessly, eat anything without discrimination, anyone who dislike drug, poor man, to cure by regulating food. However, our argument of this books wholly countermand the Department of Health's argument.

## 7. References

### 7.1. Journal articles

- [1] Lee SI. On Influence and Characteristic in Donguibogam Herbal Medicine. *The Korea Journal of Herbology*, 7(1), 21-26 (1992).
- [2] Hong WS. A Report of Investigation for Prescription Type of the Donguibogam. *A Study on the Donguibogam*, 16(8), 71-80 (1973).
- [3] Oh CK. Why the Donguibogam Regard Herb as Tangaekpean. *Korean Journal of Medical History*, 20(2), 263-290 (2011).



- [4] Jeong WY. A Study on the Donguibogam of View on Body and Disease. *Society of Physiology and Pathology in Dongui*, 16(1), 1-7 (2002).
- [5] Lee JJ. Thought of Health Caring on the Donguibogam. *Wonkwang Oriental Medicine*, 2(1), 23-33 (1992).
- [6] Ji MS & Kim YJ. A Study of the Salt in Donguibogam Internal Bodies. *Journal of the Korean Oriental Medicine Academy*, 23(6), 97-108 (2010).
- [7] Lee JS & Jang JB & Song BG. Influences on the Korean Medicines during Pregnancy of Fetus. *The Journal of Korean Oriental Medicine Journal*, 19(2), 17-35 (1998).
- [8] Choi KH & Bae JR & Jung DS & Choi HI. Literature Review on Aerohydrotherapy Around Donguibogam. *Korean Medical Engineering Association*, 13(1), 56-76 (2013).
- [9] Seo GT & Seong JS & Mun SG. Herbs Classification in Donguibogam. *Kyungseong University's Thesis Book*, 19(2), 519-535 (1998).
- [10] Lee JM & Sim SY. Acupuncture Acupuncture Consideration on Obesity in Donguibogam View. *Korean Journal of Acupuncture*, 20(1), 9-101 (2003).
- [11] Kim ML. The Value in Ecological Philosophy of Cultivation Center on the Donguibogam. *Philosophies and Culture*, 18, 209-242 (2009).
- [12] Yun TG & Kim DG. On Asceticism of Bodies in Donguibogam Regimen. *Journal of the Korean Physical Education Philosophy Association*, 22(2), 1-17 (2014).
- [13] Yu SW. The Culture of Korea. *Korean Thought and the Culture*, 79, 561-589 (2015).
- [14] Hwang JH & Koo HS & Kim GW. A Study of Transcription from Head Ache Prescriptions in the Donguibogam Headache of 10 Types. *Dongui Neuropsychiatric Association*, 23(2), 129-146 (2012).
- [15] Lee RH. Korean Linguistic Study on Han Guel Manuscript Collection in the Jangseogak Library in Donguibogam the Inner Body. *Jangseogak Library*, 21, 197-225 (2009).
- [16] Lee JW & Kim GC & Lee HW. The Research on the Meditating in the Donguibogam. *Journal of the Korean Oriental Medicine Academy*, 25(3), 149-158 (2012).
- [17] Oh CK & Kim YJ. Research on Herbs Classification in the Donguibogam Tangaekpean. *Journal of the Korean Oriental Medicine Academy*, 23(5), 55-66 (2010).
- [18] Shin JK & Kim KS & Sohn IC. The Document Research Acupuncture Therapy of Decimal Back Pain on Donguibogam Backache Classification. *Korean Journal of Acupuncture*, 21(3), 77-88 (2004).
- [19] Jung HJ. The Research on Symptoms of Characteristic in the Pit on the Donguibogam. *Journal of Korean Oriental Medicine Diagnosis*, 17(2), 90-111 (2013).
- [20] Lee JH & Lee YB. The Research in the Donguibogam Small-mindedness. *Journal of the Korean Oriental Medicine Academy*, 19(1), 194-201 (2006).
- [21] Kim C & Lee H & Lim W. Analysis of Green Area Ratio by Industrial Complex Type to Minimize Deforestation. *Public Value*, 6(3), 20-31 (2021). [\[Article\]](#)
- [22] Ha KW & Ka KW & Kim JH. Effects of the Work Ethic in Private Security Guards on Job Attitude and Job Immersion are Investigated. *International Journal of Criminal Study*, 1(2), 24-29 (2016). [\[Article\]](#)
- [23] Jeong SH & Jeong SS. Utility of Using Private Security for Protecting Whistleblowers Who Report Crime from Harm. *International Journal of Criminal Study*, 1(2), 19-23 (2016). [\[Article\]](#)
- [24] Kwak DH & Nam JS. The Impact of Press Freedom on Police Confidence. *Public Value*, 1(2), 1-7 (2016). [\[Article\]](#)
- [25] Sung HY & Park GY. Public Value of Music. *Public Value*, 4(2), 12-18 (2019). [\[Article\]](#)
- [26] Kang Y. A Study on Development of Interactive Communication Education Model for Creative Convergence in Public Value. *Public Value*, 6(3), 61-69 (2021). [\[Article\]](#)
- [27] Sung Y & Back S & Torres Christopher. The Effects of Socioeconomic Factors on Violent and Property Crimes. *International Journal of Criminal Study*, 2(1), 21-27 (2017). [\[Article\]](#)
- [28] Park MS & Doh HJ. Cases of CPTED Application in Korea & Expected Effect. *International Journal of Criminal Study*, 2(1), 16-20 (2017). [\[Article\]](#)
- [29] Lee JY. A Study on Anti-terror System Using Big Data Based. *International Journal of Criminal Study*, 3(2), 18-22 (2018). [\[Article\]](#)

[30] Sung YE. Social Realities and Its Impact on the Criminal Case of Law Enforcement Processes.  
*International Journal of Criminal Study*, 1(1), 26-32 (2016). [\[Article\]](#)

## 8. Appendix

### 8.1. Authors contribution

	Initial name	Contribution
Author	KH	-Set of concepts <input checked="" type="checkbox"/>
		-Design <input checked="" type="checkbox"/>
		-Getting results <input checked="" type="checkbox"/>
		-Analysis <input checked="" type="checkbox"/>
		-Make a significant contribution to collection <input checked="" type="checkbox"/>
		-Final approval of the paper <input checked="" type="checkbox"/>
		-Corresponding <input checked="" type="checkbox"/>
		-Play a decisive role in modification <input checked="" type="checkbox"/>
		-Significant contributions to concepts, designs, practices, analysis and interpretation of data <input checked="" type="checkbox"/>
		-Participants in Drafting and Revising Papers <input checked="" type="checkbox"/>
		-Someone who can explain all aspects of the paper <input checked="" type="checkbox"/>

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### Effect of University Website Composition on Entrance, Career Path, Satisfaction and PUBLIC VALUE -Focused on College Students Who Entered the Department of Beauty-

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#### Abstract

**Purpose:** This study analyzed the satisfaction factors through the composition of the beauty college website for college students who applied to the cosmetic department, and the purpose of this study is to provide basic data that can help the college students decide on their entrance to school and career path.

**Method:** A survey was conducted by selecting college students who entered the cosmetic department in Gangwon-do, Chungcheong-do, and Jeollabuk-do. For this survey, from August 28, 2019 to September 21, 2019, students enrolled in a four-year college of cosmetology were targeted. A total of 260 questionnaires were distributed, but a total of 253 copies were utilized excluding the questionnaires with insincere responses.

**Results:** First, it was found that scholarship system, reality perception, and curriculum, which are sub-variables of website composition, had a statistically significant positive(+) effect on entrance and career path. In addition, it was found that the sub-variables of the website composition, such as scholarship system, reality perception, and curriculum, had a statistically significant positive(+) effect.

Second, it was found that the scholarship system, reality perception, and curriculum, which are sub-variables of website composition, had a statistically significant positive(+) effect on satisfaction.

Third, it was found that entrance and career path had a statistically significant positive(+) effect on satisfaction.

**Conclusion:** The purpose of the university website is to serve users. Therefore, in order to provide high-quality service, it is necessary to identify users' requests or complaints and actively accept them.

**[Keywords]** Department of Beauty, Website Composition, Satisfaction, Entrance, Career Path

## 1. Introduction

Currently, most companies are getting opportunities to promote public values and themselves at low cost through the Internet, and each university is actively using this method to provide information on school promotion and entrance. . Therefore, the university website is used as a promotional medium for school publicity and entrance, as a tool to induce new students from neighboring and other regions to enter, and is used to recruit excellent students instead of various publicity materials. And it is to promote competitiveness for entrance through various promotions and marketing for new students.

In particular, recently, publicity through video is recognized as a very effective communication method for test takers, so most universities are producing promotional videos to be published on university websites[1]. The university website is the first place that students visit when they want to obtain information about the university and make a selection. However, the examinee has to take responsibility for the importance and risk in choosing a university, and although there is an opportunity for transfer, it is not easy to change the university in the middle

of the decision-making process. In other words, candidates should actively search for information on departments, employment, scholarships, etc. related to their majors on the website of the university they want to apply for, and the website of the university should provide accurate information necessary for the test takers at the forefront of using the entrance exam[2][3].

With the development of the Internet service environment, various studies are being conducted on the use of university websites, are evaluation factors of university department websites[4], is a method of expressing spatial information through analysis of campus maps on university websites[1], is development of differentiated promotional video content between universities[5], conducted a study on the accessibility of university library services through the website[6], conducted a study on the needs of university library users[7], conducted a study on the use of websites in university education[8]. In particular, compared and analyzed the contents of major domestic university websites in a study on how to build a website as a university PR medium[9], providing entrance information through various bulletin boards and information sites, introducing scholarship systems, exchange student systems, and various privileges; It is presented in detail by dividing the activities and career paths of alumni who can predict the future of the examinees, the history of the school and various things to be proud of, and the examinees, current students, and graduates[10].

Entrance and career setting are beliefs or judgments about whether occupations and interests are achievable[11]. University life is probably the biggest task of college students in the late adolescence from the developmental stage, and it is an important task that directly leads to satisfaction with life in the future[12]. Career decision is one of decision making that requires a complex process as a concept that encompasses the entire life cycle of an individual, including job. In particular, it is recognized as important because students, who are at the time of career decision-making, have to solve career challenges based on their own initiative and confidence[13]. It is defined as knowledge and technical competence, knowledge that promotes successful career management by an individual with his/her own competence, and comprehensive ability to prepare and develop a career, as an integrated ability necessary for the purpose of choosing and realizing a career[14].

Looking at these preceding studies, it was suggested that career education and career counseling can help college students make more firm career decisions[15], confirmed that it had a positive effect on the vocational education and career education of youths in vocational(training) schools [16].

Satisfaction with university education was defined as the process and criteria for value judgment to achieve the educational needs desired by students. The results of students' educational satisfaction can be important data to evaluate the quality and service level of university education[17]. Therefore, the study of educational service and satisfaction has important significance in that it can systematically analyze consumer perception of education service and improve education service[18].

At the same time, universities are more likely to require applicants to have a high level of expertise in the new profession[19]. Therefore, by presenting the career curriculum on the homepage of the department, it is necessary to analyze which areas and basic knowledge the applicant needs in advance[20]. In other words, students should be able to choose from the university website in order to meet their preferences, needs, and satisfaction with their career paths[21]. This may be a factor that increases one's self-esteem and responsibility for life in the future[22]. Nevertheless, there is insufficient research to confirm the satisfaction factors of students aspiring to the cosmetic department when using the university website. Therefore, the purpose of this study is to provide basic data that can help university students who have applied for the department of cosmetology to make decisions about their university entrance and career by analyzing the satisfaction factors through the composition of the beauty university website.

## 2. Research Method

### 2.1. Research hypothesis

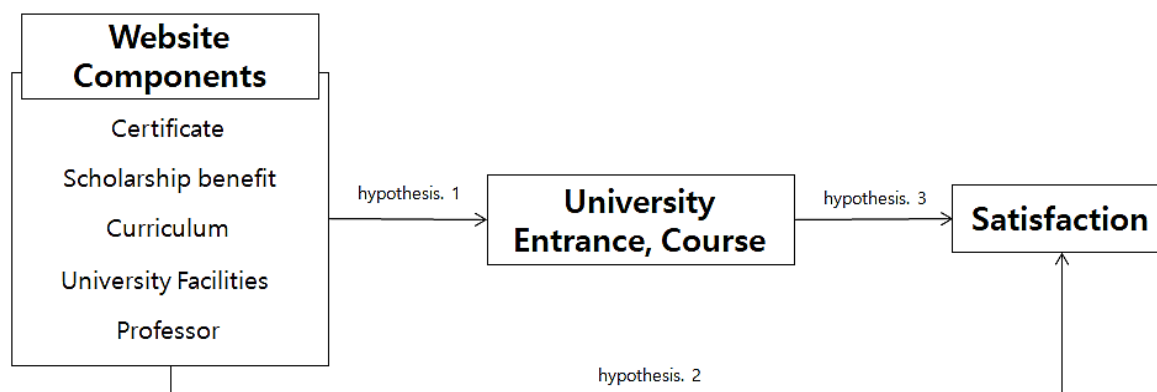
This study was conducted for college students enrolled in the Department of Beauty, who obtained information from the university using the university website before entering the Department of Beauty. The following hypotheses were established, and the research model is shown in <Figure 1>.

Hypothesis 1. The composition of the university website(certificate, scholarship benefits, curriculum, university facilities, faculty) will have an effect on entrance and career path.

Hypothesis 2. The composition of the university website(certificate, scholarship benefits, curriculum, university facilities, faculty) will have a positive(+) effect on satisfaction.

Hypothesis 3: Entrance and career path will have a positive(+) effect on satisfaction.

**Figure 1.** Research model.



### 2.2. Research subject and data analysis

This study conducted a survey by selecting university students who entered the cosmetic department in Gangwon-do, Chungcheong-do, and Jeollabuk-do. For this study, from August 28, 2019 to September 21, 2019, it was conducted for students enrolled in the 4-year cosmetic department. A total of 260 questionnaires were distributed, but a total of 253 were used, excluding the questionnaire with insincere responses.

For data analysis, SPSS V.22 program was used. Frequency analysis was conducted to find out the general characteristics of the respondents, and an exploratory factor analysis was performed to classify the dimensions of website usage, entrance and career path, and satisfaction. Cronbach'  $\alpha$  was performed to verify the reliability of each measurement tool. In addition, correlation analysis was performed to find out the correlation between variables. Multiple regression analysis was performed to examine the effect of university website composition(Certificate, Scholarship benefits, Curriculum, University facilities, Faculty) on entrance, career path and satisfaction.

### 2.3. Measuring tool

The general characteristics of this study were reconstructed according to the purpose of this study based on the previous studies of Jeon HS, Bang HJ(2018) [23], and consisted of a total of 5 questions. Based on the previous study of Cho MH(2019) [24], the website usage status was constructed according to the purpose of this study, and consisted of a total of 16 questions.

The career path and entrance were based on the previous research of Cho MH(2019) [24] and consisted of a total of 25 questions. The website was composed based on the previous research

of Lee KH(2004)[25], and consisted of a total of 10 questions. Satisfaction was reconstructed according to the purpose of this study based on the previous studies of Jeon HS, Park DE(2018) [26], and consisted of a total of 5 questions, all using a 5-point Likert scale <Table 1>.

**Table 1.** Questionnaire composition.

	Division	Question	Measurement type	References
General characteristic	Gender, desired major, reason for choosing major, high school, beauty school experience	5	5 points likert scale	Hongshin Jeon, Hyojin Bang(2018)[23], reconstructed researcher
Website usage status	How to obtain information about the university, The convenience of using the website, the number of searches for the department of beauty, the reason for searching for the department of beauty	16	5 points likert scale	Jo Mihee Jo(2019)[24]
Website womposition	Acquisition of qualifications, scholarship benefits, curriculum, university facilities, faculty	25	5 points likert scale	Mihee Jo(2019)[24]
Entrance and career	University entrance, course	10	5 points likert scale	Lee KyungHee(2004)[25], Mihee Jo(2019)[24])
Satisfaction	Department satisfaction	6	5 points likert scale	Hongshin Jeon, Dongeun Park(2018)[26], reconstructed researcher

### 3. Research Results

#### 3.1. General characteristics of study subjects

The general characteristics of the study subjects were shown in <Table 2>. By gender, there were 213 females(84.2%) and 40 males(15.8%), showing the overwhelming majority of women. The desired major was hair 109(43.1%), makeup 78(30.8%), skin 46(18.2%), and nail art 20(7.9%) in that order. The reason for choosing a major is that they are interested 170(67.2%), most likely to fit the aptitude 56(22.1%), 26(10.3%) likely to get a job, and 1(0.4%) likely to be easy appear. By high school, 99 students(39.1%) from the national humanities and private humanities, respectively, 37(14.6%) from the vocational school, 10 from Maester High School(4.0%), and 8 from the GED(3.2%). 153 people(60.5%) had experience in beauty school, and 100 people(39.5%) had no experience.

**Table 2.** General characteristics of study subjects.

Division	Contents	Frequency(N)	Ratio(%)
Gender	Male	40	15.8
	Female	213	84.2
Hope major	Hair	109	43.1
	Make up	78	30.8
	Skin	46	18.2
	Nail art	20	7.9
Reason for choosing major	Find a job	26	10.3
	Interesting	170	67.2
	Aptitude	56	22.1
	Seems easy	1	.4

Hope major	National humanities high school	99	39.1
	Private humanities	99	39.1
	Private humanities high school	37	14.6
	Meister high school	10	4.0
	GED	8	3.2
Beauty academy	Yes	153	60.5
	No	100	39.5
Total		253	100%

Note: N=253.

### 3.2. Status of website use by study subjects

<Table 3> shows the website usage status of the study subjects. First, looking at how to obtain information about universities, 127 students(50.2%) from the university website, 82(33.2%) from the academy, 24(9.5%) high school homeroom teachers, 10 friends and seniors(4.0%), 8 people from SNS(3.2 %) in the order of. As for the convenience of using the website, 210 people(83.0%) said it was convenient, and 43 people(17.0%) said it was uncomfortable. The number of searches in the Department of Beauty was 162 people(64%) with less than 1-5 times, 54 people with less than 6-10 times(21.3%), 25 people with less than 11-15 times(9.9%), and 12 people with more than 16-20 times(4.7%) in the order of.

As for the reason for the Department of Beauty search, 82(32.4%) people answered 'College search according to aptitude and interest', 63(24.9%) people 'Vision and academic search for beauty', and 51(20.2%) people 'according to grades' Searching for the university to go to' appeared. 35(13.2%) people answered 'searching for employment and future careers' and 22(8.7%) people answered 'they did not decide on the university and department they wanted to attend, but decided their career path by obtaining information about the school and department'.

**Table 3.** Status of website use by study subjects.

Division	Contents	Frequency(N)	Ratio(%)
How to get information about universities	Universities website	127	50.2
	SNS	8	3.2
	Beauty academy	84	33.2
	Friends and seniors	10	4.0
	High school homeroom T \ teacher	24	9.5
Convenience of using the website	Convenient	210	83.0
	Uncomfortable	43	17.0
Number of searches for the department of beauty	1 to less than 5 times	162	64.0
	6 to less than 10 times	54	21.3
	11 to less than 15 times	25	9.9
	16-20 or more	12	4.7
Department of beauty search reason	Search for the department you want to go to according to your grades	51	20.2
	Department search according to aptitude and interest	82	32.4
	Vision and academic exploration for beauty	63	24.9
	Search for employment and future careers	35	13.8



	I haven't decided on the university and department I want to go to, but I can get information about the university and department to make a decision on my career path.	22	8.7
Total		253	100%

Note: N=253.

### 3.3. Factor analysis and reliability analysis of website composition

In <Table 4>, exploratory factor analysis was performed using the Varimax rotation method to reveal the subdimensions of the homepage composition. A total of 25 items were analyzed, and 17 items were analyzed except for the 8 items that impair reliability and explanatory power. As the result of Bartlett's identity matrix  $\chi^2=1997.451(p<.001)$ , the correlation between variables was sufficient to constitute a factor, and the sample fit of KMO was .818, and the result of checking commonality was also measured. It satisfies the assumption of factor analysis of the data. A total of five factors were derived, and factor 1(16.404%) was named 'certificate' and factor 2(32.323%) was named 'scholarship system'. Factor 3(46.545%) was named 'reality perception', factor 4(59.082%) was named 'curriculum', and factor 5(68.476%) was named 'faculty'.

The five factor loading values were over  $\pm .50$ , so the extracted factors were analyzed to have secured validity. Reliability(Cronbach'  $\alpha$ ) was .825 for qualifications, .797 for welfare, .811 for reality perception, and .811 for curriculum. 713 and faculty members showed high reliability of .647.

**Table 4.** Factor analysis and reliability analysis of website composition.

Factor	Item	Components					Cronbach' $\alpha$
Certificate	Acquisition of qualifications 3	.843	.056	.250	.063	.118	.825
	Acquisition of qualifications 4	.833	.201	.124	.001	-.103	
	Acquisition of qualifications 5	.685	-.034	.294	.220	.098	
	Acquisition of qualifications 2	.653	.390	.069	.224	-.002	
Scholarship benefit	Scholarship system 4	-.007	.875	.056	.059	-.174	.797
	Scholarship system 5	.119	.830	.061	.098	.188	
	Scholarship system 3	.302	.604	.271	-.105	.239	
	Scholarship system 2	.441	.566	.095	.056	.304	
Curriculum	Curriculum 2	.213	-.092	.794	.145	.246	.811
	Curriculum 1	.128	.207	.762	.190	-.256	
	Curriculum 5	.186	.149	.720	.265	.149	
	Curriculum 4	.359	.288	.595	.196	.193	
University facilities	University facilities 2	.090	.140	.159	.767	.261	.713
	University facilities 1	.120	.161	.192	.764	-.217	
		.121	-.136	.234	.732	.164	
		-.027	.091	.098	.072	.887	.647
		.291	.432	.164	.294	.537	
KMO(Kaiser-meyer-olkin)					.818		
Bartlett sphericity verification			Chi-square		1997.451		

(Bartlett' test of sphericity)	df(p)	136(.000)
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### 3.4. Factor analysis and reliability analysis of career path and entrance

<Table 5> shows an exploratory factor analysis using the Varimax rotation method to reveal the subdimensions of career path and entrance. A total of 10 items were analyzed. Nine items were analyzed except for one that impaired reliability and explanatory power. As the result of Bartlett's identity matrix,  $\chi^2=1360.034(p<.001)$ , the correlation between variables was sufficient to constitute a factor, and the sample fit of KMO was .856. The result of checking commonality also satisfies the assumption of factor analysis of the measured data. A total of five factors were derived, and factor 1(39.190%) was named 'entrance', and factor 2(71.267%) was named 'career path'.

The two factor loading values were over  $\pm .70$ , so the extracted factors were analyzed to have secured validity, and the reliability(Cronbach'  $\alpha$ ) showed very high reliability of .900 for entrance and .852 for career path.

**Table 5.** Factor analysis and reliability analysis of career path and entrance.

Factor	Item	Components		Cronbach' $\alpha$
University en- trance	Entrance decision 3	.847	.200	.900
	Entrance decision 5	.830	.128	
	Entrance decision 4	.819	.125	
	Entrance decision 2	.814	.224	
	Entrance decision 1	.794	.361	
Course	Career Determination 4	.143	.877	.852
	Career Determination 3	.270	.819	
	Career Determination 5	.146	.813	
	Career Determination 2	.207	.731	
KMO(Kaiser-Meyer-Olkin)			.856	
Bartlett sphericity verification (Bartlett' test of sphericity)			Chi-square	1360.034
			df(p)	36(.000)

### 3.5. Satisfaction factor analysis and reliability analysis

<Table 6> shows the Satisfaction factor analysis and reliability. An exploratory factor analysis was performed to reveal the sub-dimensions of analysis satisfaction using the Varimax rotation method, and a total of 6 items were analyzed. As the result of Bartlett's identity matrix,  $\chi^2=656.556(p<.001)$ , the correlation between variables was sufficient to constitute a factor, and the sample fit of KMO was .849. The result of checking commonality also satisfies the assumption of factor analysis of the measured data. A total of one factor was derived, and factor 1(59.114%) was named 'satisfaction'.

The two factor loading values were over  $\pm .60$ , and the extracted factors were analyzed to have secured validity. Reliability(Cronbach'  $\alpha$ ) showed a very high reliability of .855 for satisfaction.

**Table 6.** Satisfaction factor analysis and reliability analysis.

Factor	Item	Components	Cronbach' $\alpha$
Satisfaction	Satisfied 4	.853	.855
	Satisfied 1	.822	
	Satisfied 2	.811	
	Satisfied 5	.737	
	Satisfied 3	.699	
	Satisfied 6	.674	
KMO(Kaiser-meyer-olkin)			.849
Bartlett sphericity verification (Bartlett' test of sphericity)			656.556
			15(.000)

### 3.6. Correlation verification between study variables

Correlation analysis was performed to examine the direction and degree of relationship between each research variable whose reliability was confirmed. Looking at the results drawn in <Table 7>, the correlation coefficients between the research concepts were statistically confirmed to be related to each other.

Pearson's correlation analysis was performed to confirm the correlation between the major variables of this study, such as qualifications, scholarship benefits, reality perception, curriculum, faculty, entrance, career path, and satisfaction. Certificates include scholarship benefits( $r=.440$ ,  $p<.001$ ), reality perception( $r=.547$ ,  $p<.001$ ), curriculum( $r=.336$ ,  $p<.001$ ), faculty( $r=.305$ ),  $p<.001$ ), entrance( $r=.349$ ,  $p<.001$ ), career path( $r=.484$ ,  $p<.001$ ), satisfaction( $r=.381$ ,  $p<.001$ ) positive(+) showed a correlation of Scholarship benefits include reality perception( $r=.378$ ,  $p<.001$ ), curriculum( $r=.193$ ,  $p<.001$ ), faculty( $r=.437$ ,  $p<.001$ ), and entrance( $r=.387$ ),  $p<.001$ ), career path( $r=.554$ ,  $p<.001$ ), and satisfaction( $r=.355$ ,  $p<.001$ ). The perception of reality is the curriculum( $r=.509$ ,  $p<.001$ ), faculty( $r=.376$ ,  $p<.001$ ), entrance( $r=.625$ ,  $p<.001$ ), career path ( $r=.490$ ,  $p<.001$ ) and satisfaction( $r=.711$ ,  $p<.001$ ). The curriculum includes faculty ( $r=.332$ ,  $p<.001$ ), entrance( $r=.551$ ,  $p<.001$ ), career path( $r=.242$ ,  $p<.001$ ), and satisfaction( $r=.585$ ,  $p<.001$ ). Faculty members showed a correlation between entrance( $r=.352$ ,  $p<.001$ ), career path( $r=.320$ ,  $p<.001$ ), and satisfaction( $r=.291$ ,  $p<.001$ ). Advancement was shown to have a correlation between career path( $r=.459$ ,  $p<.001$ ) and satisfaction( $r=.788$ ,  $p<.001$ ). The career path was found to be correlated with satisfaction( $r=.448$ ,  $p<.001$ ).

**Table 7.** Correlation verification between study variables.

	1	2	3	4	5	6	7	8
1. Certificate	1							
2. Scholarship benefit	.440***	1						
3. Curriculum	.541***	.378***	1					
4. University facilities	.336***	.193***	.509***	1				
5. Professor	.305***	.437***	.376***	.332***	1			
6. University entrance	.349***	.387***	.625***	.551***	.352***	1		
7. Course	.484***	.554***	.490***	.242***	.320***	.459***	1	

8. Satisfaction	.381***	.355***	.711***	.585***	.291***	.788***	.448***	1
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Note: N=253.

## 4. Effect of University Website Configuration on Career Path, Entrance and Satisfaction

### 4.1. Effect of university website configuration on career path and entrance

In order to test the hypothesis that the composition of the university website will affect the entrances process, multiple regression analysis was carried out using certificate, scholarship system, reality perception, curriculum, and faculty as independent variables and career and college entrance as dependent variables. The results are shown in <Table 8>.

The independent variables, qualifications, welfare, and reality perception, which are sub-variables of website composition, showed a statistically significant positive(+) effect on career. Examining this in detail, the qualifications were  $\beta=.201$ ,  $t=3.348$ ,  $p<.001$ , the scholarship system was  $\beta=.338$ ,  $t=5.761$ ,  $p<.001$ , and the perception of reality was  $\beta=.173$ ,  $t=2.476$ ,  $p<.001$ .

The collinear statistic of career path VIF was 1.585 certification, 1.512 scholarship system, and 2.150 reality perception, and Durbin-Watson showed 2.190, which is close to the standard value of 2, so it was judged that there was no correlation between the residuals and was suitable for the regression model.

Scholarship system, reality perception, and curriculum, which are sub-variables of website composition, which are independent variables, were adopted as they showed a statistically significant positive(+) effect on entrance. Looking at this in detail, the scholarship system showed  $\beta=.188$ ,  $t=3.454$ ,  $p<.001$ , the reality perception showed  $\beta=.474$ ,  $t=7.051$ ,  $p<.001$ , and the curriculum showed  $\beta=.314$ ,  $t=5.857$ ,  $p<.001$ .

The collinear statistic VIF of entrance was 1.443 for the scholarship system, 1.790 for reality, and 1.408 for the curriculum, while Durbin-Watson showed 2.380, which is close to the standard value of 2. Therefore, it was judged that there was no correlation between the residuals, and it was found to be suitable for the regression model.

**Table 8.** Effect of University website composition on career path and higher education.

dependent variable	Independent variable (website components)	B	Standard error	$\beta$	t	Collinearity statistics	
						Tolerance	VIF
Course	Certificate	.188	.056	.201	3.348***	.632	1.582
	Scholarship benefit	.338	.059	.338	5.761***	.661	1.512
	University facilities	.171	.069	.173	2.476***	.465	2.150
	Curriculum	-.098	.066	-.089	-1.481	.624	1.603
	Professor	.005	.042	.007	.124	.730	1.370
University entrance	Certificate	-.084	.060	-.079	-1.395	.637	1.570
	Scholarship benefit	.212	.061	.188	3.454***	.693	1.443
	University facilities	.474	.067	.426	7.051***	.559	1.790
	Curriculum	.387	.066	.314	5.857***	.710	1.408
	Professor	.025	.045	.029	.556	.731	1.368

Course :  $F=32.233^{***}$ ,  $R^2=.440$ , Durbin-Watson 2.190

University entrance :  $F=48.439^{***}$ ,  $R^2=.495$ , Durbin-Watson 2.380

Note: \*\*\*:  $p<.001$ , \*\*:  $p<.01$ , \*:  $p<.05$ .

## 4.2. Effect of university website configuration on satisfaction

In order to test the hypothesis that the composition of the university website will affect the satisfaction level, multiple regression analysis was conducted with the sub-variables of the university website composition, qualifications, scholarship system, reality perception, curriculum, and faculty as independent variables and satisfaction as the dependent variable. The results are shown in <Table 9>. Scholarship system, reality perception, and curriculum, which are sub-variables of website composition, which are independent variables, showed statistically significant positive(+) effects and were adopted. Looking at this in detail, the scholarship system was found to be  $\beta=.145$ ,  $t=2.944$ , and  $p<.01$ . Reality perception was  $\beta=.561$ ,  $t=10.140$ ,  $p<.001$ . And the curriculum was  $\beta=.319$ ,  $t=6.556$ ,  $p<.001$ .

The collinear statistic VIF was found to be 1.441 for scholarship system, 1.809 for reality perception, and 1.406 for curriculum. Dubin-Watson showed 1.982, which is close to the reference value of 2, so it was judged that there was no correlation between the residuals and it was found to be suitable for the regression model.

**Table 9.** Effect of University Website Configuration on Satisfaction.

Dependent variable	Independent variable (website components)	B	standard error	$\beta$	t	Collinearity statistics	
						Tolerance	VIF
Satisfaction	Certificate	-.064	.045	-.073	-1.414	.637	1.571
	Scholarship benefit	.136	.046	.145	2.944**	.694	1.441
	University facilities	.519	.051	.561	10.170***	.553	1.809
	Curriculum	.327	.050	.319	6.556***	.711	1.406
	Professor	-.052	.035	-.072	-1.490	.729	1.372
Satisfaction : F=70.000***, R <sup>2</sup> =.588, Dubin-Watson 1.982							

Note: \*\*\*:  $p<.001$ , \*\*:  $p<.01$ , \*:  $p<.05$ .

## 4.3. Effect of entrance and career path on satisfaction

In order to test the hypothesis that entrance and career path affect satisfaction, real-time results of multiple regression analysis were shown in <Table 10>, using career path and entrance as an independent variable and satisfaction as a dependent variable. The independent variables, college entrance and career path, were adopted as they showed a statistically significant positive(+) effect. Examining this in detail, it was found that  $\beta=.736$ ,  $t=17.009$ ,  $p<.01$  for entrance, and  $\beta=.113$ ,  $t=2.618$ ,  $p<.05$  for career path.

The collinear statistic VIF was 1.260 for both entrance and career, and for Dubin-Watson was 2.025, which was close to the standard value of 2. Therefore, it was judged that there was no correlation between the residuals and it was found to be suitable for the regression model.

**Table 10.** Effect of entrance and career path on satisfaction.

Dependent variable	Independent variable (website components)	B	standard error	$\beta$	t	Collinearity statistics	
						Tolerance	VIF
Satisfaction	University entrance	.615	.036	.736	17.009***	.764	1.260
	Course	.107	.041	.113	2.618**	.794	1.260
Satisfaction : F=212.045***, R <sup>2</sup> =.628, Dubin-Watson 2.025							

Note: \*\*\*:  $p<.001$ , \*\*:  $p<.01$ , \*:  $p<.05$ .

## 4. Conclusion

This study analyzed the satisfaction factors through the composition of the beauty university website for college students who applied to the department of cosmetology, and investigated the effect on their decision to go to university and their career path. A summary of the verification results is as follows.

First, it was found that the scholarship system, reality perception, and curriculum, which are sub-variables of website composition, had a statistically significant positive(+) effect on entrance and career path. It was found that the scholarship system, reality perception, and curriculum, which are sub-variables of website composition, had a statistically significant positive(+) effect.

Second, it was found that the scholarship system, reality perception, and curriculum, which are sub-variables of website composition, had a statistically significant positive(+) effect on satisfaction.

Third, it was found that entrance and career path had a statistically significant positive(+) effect on satisfaction.

Taking these results together, the purpose of the university website is to serve as a service for users. Therefore, in order to provide high-quality user services, it is necessary to identify users' requests or complaints and actively accept them.

As shown in the study of Sung MinSung[27], Cho JungSik(2007)[28], by actively utilizing online media for students to acquire information, and by analyzing the utilization according to the promotional contact points in detail, it is more effective and strategic for the target examinees desired by the university. It is possible to establish a way to access. Also, as shown in the study of Choi EunSob(2013)[29], domestic universities consist of various information and strategy menus, achievements, special lectures, etc. on their websites. This configuration is consistent with the website configuration of this study. Therefore, if a menu including the vision, core competency, development direction, and educational goal of the Department of Beauty is presented when composing the website, along with a more detailed action strategy and period, it is believed that the Department of Beauty's unique strategic differentiation can be achieved. This will help students a lot in their career decisions.

In addition, as shown in the study of Lim JaeSik(2019)[30], it is supported by the fact that students' college satisfaction and intention to continue their studies were high in the college selection process, such as employability, college growth potential, location and access, etc. . Therefore, it is necessary for universities to create a website that students prefer and consider future employment.

In addition, it is considered that the websites of universities and beauty departments should improve the accessibility and usefulness of the websites by providing excellent qualitative information that the examinees really want rather than expanding the content quantitatively.

On the other hand, this study has the following limitations in seeking an efficient website structure. The point is that the target of the sample is Gangwon-do, Chungcheong-do, and some regions of Jeollabuk-do, and the number of samples is small. Therefore, we would like to suggest the direction of the follow-up study to expand the number of samples and to expand the region to the whole country.

## 5. References

### 5.1. Journal articles

- [1] Paik JH. A Study on the Development of Differentiated Promotional Video Contents between Universities -Focusing on the Four-year Universities in Busan-. *The Korean Society of Science & Art*, 37(1), 113-123 (2019).

- [2] Park SB & Park YH. A Study on the Identity and Activation of University Homepages through the Design Analysis. *Keimyung Research Journal*, 18(2), 365-379 (2000).
- [3] Kang KS & Lee YW & Lee KH & Lee YS. Relative Importance and Priority of Evaluation Elements in University Department Homepage Selection Process -With Special Reference to College Prep Students in Busan-. *The Journal of the Korea Contents Association*, 15(3), 488-498 (2015).
- [4] Kim ST. A Study of the Methods to Represent a Campus Map on a University Homepage. *Archives of Design Research*, 25(4), 87-100 (2012).
- [5] Choi EJ & Ryoo JD. An Evaluative Analysis of Service Accessibility on University Library Homepage. *Journal of the Korean Society for Library and Information Science*, 39(3), 245-261 (2005).
- [6] Sung KJ. A Study on the Needs of the University Library Users. *Journal of the Korean Society for Library and Information Science*, 38(4), 49-65 (2004).
- [7] Lee KK. Using the Home Page of Internet on the University Education. *Korea Business Review*, 1(2), 139-158 (1997).
- [8] Paik JH. A Study on the Development of Differentiated Promotional Video Contents between Universities -Focusing on the Four-year Universities in Busan-. *Korea Science & Art Forum*, 37(1), 133-123 (2019).
- [9] Moon CS. Effective Use of University Web Sites as a PR Tool: Focusing on the Contents of University Homepage. *Korean Journal of Broadcasting and Telecommunication Studies*, 17(2), 177-206 (2003).
- [10] Lee HR & Lee SH & Cheon MS & Choi SK. The Effects of Career Exploration Training Program on Middle School Girl Students' Interpersonal Relationship Ability and Career Maturity. *The Journal of Career Education Research*, 20(2), 151-164 (2007).
- [11] Cho H. The Effect of Learned Helplessness on the Adaptation to College Life. *Regulations*, 6(2), 10-15 (2021). [\[Article\]](#)
- [12] Ku YA & Suh MS & Ahn SS. A Study on the Effects of Major Selection Motivation and Career Stress of College Students on Career Decision Making Self-efficiency, Career Decision Level. *Journal of Employment and Career*, 10(4), 49-74 (2020).
- [13] Jin SM. Career Competencies and Implications from the Perspective of Lifelong Learning. *Journal of Lifelong Learning Society*, 5(2), 21-44 (2009).
- [14] Kim NY & Kim MJ & Park MH. The Effects of Psychological and Environmental Career Barriers Perceived by Undergraduates on Career Decision Levels: Mediating Effects of Career Decision Making Self-efficacy. *The Korean Society for Holistic Convergence Education*, 24(4), 31-50 (2020).
- [15] Cho CH. The Effect of Job Training Satisfaction on Career Attitude Maturity in Vocational College Youth: Mediating Effects of Career Decision-making Self-efficacy. *The Society of Digital Policy & Management*, 19(5), 15-21 (2021).
- [16] Joo KP. Informal Learning during the Early Career Crisis of Entry-level Youth Workers as Public-sector Temporary Employees in the Republic of Korea. *International Journal of Crisis & Safety*, 2(3), 18-27 (2017). [\[Article\]](#)
- [17] Kim EJ & Jeong MJ. Analysis on Primary Factors of University Education Services That Affects Contentment of University. *Korean Business Education Review*, 32(1), 1-24 (2017).
- [18] Kim MR & Hwang DS. Consumer Satisfaction Model with Educational Services in Higher Education. *Journal of Families and Better Life*, 24(6), 17-32 (2006).
- [19] Lee JY. Application and Satisfaction Study of Medua-based Teaching & Learning Method in Beauty Education: Focusing on Flipped Learning Using Google Classroom. *Public Value*, 6(1), 92-105 (2021). [\[Article\]](#)
- [20] Yi JI. Research on Reinforcing Police English Proficiency based on IoT convergence Learning Contents. *International Journal of Police and Policing*, 4(2), 7-12 (2019). [\[Article\]](#)
- [21] Sa YJ. The Study on Relationship between Satisfaction with Flexible-work Arrangement, Job Satisfaction and Decision Making. *Public Value*, 6(3), 41-48 (2021). [\[Article\]](#)
- [22] Kang C. The Impact of Collective Art Therapy on the Learned Lethargy. *Regulations*, 6(3), 10-18 (2021). [\[Article\]](#)
- [23] Jeon HS & Bang HJ. Effect of Self-efficacy and Satisfaction with Their Major According to General



- Characteristics of on Cosmetology Students. *Journal of Investigative Cosmetology*, 14(2), 227-236 (2018).
- [26] Jeon HS & Park DE. A Study on the Preparation for University Examination of Students Admitted to Department of Cosmetology. *Journal of the Korean Society of Cosmetology*, 24(4), 727-734 (2018).
- [27] Sung MS & Cho JS. The Analysis of Students' Media Usage in the University Selection Process: An Integrated Communication Perspective. *The Korean Journal of Advertising and Public Relations*, 9(2), 207-243 (2007).
- [28] Choi ES. A Study of Brand Differentiation Strategy through Universities' Websites Contents Analysis. *Journal of Practical Research in Advertising and Public Relations*, 6(2), 114-138 (2013).
- [30] Kim SN & Lim JS. A Study on College Freshmen's College Decision Factors. *Journal of Korean Society for the Scientific Study of Subjectivity*, 44(0), 31-48 (2019).

## 5.2. Thesis degree

- [24] Cho MH. The Effect of the Recognition of the Composition of Beauty College's Website on the Satisfaction and the Career Decision. Konkuk University, Master's thesis (2019).
- [25] Lee KH. Study of the Development Effect of College Homepage on High School Student's Perception of the Reality Related to Going on to University, and Course Decision. Yonsei University, Master's Thesis (2004).
- [29] Lim JS. A Study on the Choice of College, College Satisfaction and Academic Pursuit Intention -Focused on Human Ecological Theory and Triple Media Marketing-. Wonkwang University, Doctoral Thesis (2020).

## 6. Appendix

### 6.1. Authors contribution

	Initial name	Contribution
Lead Author	HJ	-Set of concepts <input checked="" type="checkbox"/>
		-Design <input checked="" type="checkbox"/>
		-Getting results <input checked="" type="checkbox"/>
		-Analysis <input checked="" type="checkbox"/>
		-Make a significant contribution to collection <input checked="" type="checkbox"/>
		-Final approval of the paper <input checked="" type="checkbox"/>
Corresponding Author*	JM	-Corresponding <input checked="" type="checkbox"/>
		-Play a decisive role in modification <input checked="" type="checkbox"/>
		-Significant contributions to concepts, designs, practices, analysis and interpretation of data <input checked="" type="checkbox"/>
		-Participants in Drafting and Revising Papers <input checked="" type="checkbox"/>
		-Someone who can explain all aspects of the paper <input checked="" type="checkbox"/>

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## Development and Effect of Pre-Educational Program for Pre-Health Education PUBLIC Teacher's School Health Practice

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### Abstract

**Purpose:** This study was attempted to confirm the effect on resilience, teacher efficacy, and satisfaction after developing and applying pre-educational program as a way to improve resilience of pre-health education public teacher to school health practice.

**Method:** Research design is a similar experimental study of one group pretest-posttest design. The subject of this study was a total of 8 pre-educational programs from September 4 to November 20, 2019, targeting 10 of sophomores at a university. The collected data were analyzed by descriptive statistics and Wilcoxon Signed-Rank Test using the SPSS/WIN 21.0 program.

**Results:** There was a significant difference before and after the implementation of the pre-educational program in the area of activeness in technology acquisition ( $Z=-2.81$ ,  $p=.005$ ), excluding the future-oriented area ( $Z=-.97$ ,  $p=.331$ ) and the independence/risk-taking area ( $Z=-.15$ ,  $p=.878$ ), which are sub-areas of the resilience. There were statistically significant differences in all areas of teaching efficacy ( $Z=-2.54$ ,  $p=.011$ ), task-interpersonal efficacy ( $Z=-2.25$ ,  $p=.024$ ), community-linked efficacy ( $Z=-2.55$ ,  $p=.011$ ), and health service efficacy ( $Z=-2.04$ ,  $p=.041$ ), which are sub-areas of teacher efficacy. Satisfaction was found to have an overall average score of 22.80 out of 25.

**Conclusion:** It was confirmed that the pre-educational program could be an intervention plan to increase the resilience and teacher efficacy of School Health Practice. In addition, post-educational programs are also needed to improve resilience such as future-oriented, independence/risk-taking to systematically operate educational practice.

**[Keywords]** Program, Resilience, Efficacy, Satisfaction, Public

## 1. Introduction

### 1.1. The necessity of research

School field training for prospective health teachers is a learning process that enhances the effectiveness of education by directly participating in school field training where health teachers practice while attending nursing college [1]. School field training is unified into a total of 4 weeks, and the period is relatively shorter than that of 9 weeks or more in general education colleges [2]. Therefore, there is a need to have an opportunity to gather and reflect on various opinions related to this because understanding and practice opportunities for teaching may be insufficient [3].

Prospective health teachers mostly feel "excited and worried" before school field training. They tend to have vague tension and fear about teaching positions because they are completing teaching courses but only learn theoretical things and lack understanding of the school field [2]. In addition, in the process of becoming a teacher, they are exposed to new school culture, form

complex social relationships, and experience confusion and conflict due to dual self-identity[4]. The ability to cope healthily without despair or frustration in these stressful situations is resilience[5][6][7]. Prospective health teachers need to increase their resilience by experiencing activities for understanding and adaptation to the school field[8]. This is where the need for pre-educational programs for school field training is raised.

The difficulties that prospective health teachers felt in the field during educational practice are as follows: the number of students, inducing voluntary participation of students, planning of teaching plans, differences in theories and practices learned at school, student guidance, and burden of administrative work. Therefore, it is necessary to establish a course that includes teaching content to overcome the difference between theory and practice before field education and provides counseling and field experience necessary for dealing with students at school[9]. In particular, studies on expectations for the role of health teachers, role performance, and demand for improvement in field training pointed out that prospective health teachers were given the highest expectations for the role of "education" and that educational support such as training of health educators was needed[10].

Teacher efficacy is a major factor influencing the active role performance of health teachers. This is a belief in one's ability to properly select, organize, and carry out the actions necessary to achieve certain results at school and persist in any difficulties. According to the teacher efficacy judgment process model, it is influenced by teaching aptitude and prior experience. In particular, in the case of prior experience, it consists of teaching experience as an educational trainee, actual teaching experience, knowledge of subject content, teaching method, and personality characteristics. In addition, prior experience is correlated with teaching aptitude as well[11]. Recently, not only the role of health service provider but also the role of the educator has been emphasized to health teachers[12], so it is necessary to self-identify whether one can play the role required in the school field before practice.

School field training is a place of opportunity for prospective health teachers to have experiences related to their identity as teachers while practicing. Therefore, a strategy for prior experience is required to increase the resilience of school field practice. An important factor in improving resilience is that there are many opportunities for practice to be carried out in schools where the knowledge content and educational methods learned at teacher training institutions are used in the field[13]. Four weeks of school field training for prospective health teachers is not sufficient[10], so they cannot gain a sufficient understanding of the teaching profession. In addition, education before, during, and after the practice is not systematically conducted at teacher training institutions[14]. Considering these points, it is considered necessary to have a resilience improvement program for prospective health teachers as a preliminary preparation process for school field training.

Prior studies related to school field training of prospective health teachers were conducted on the following topics: demand for improvement of health teacher education practice[8], school field practice experience and job analysis[2][3][15]; expected and played role of health teachers perceived by nursing students[16][17]; teacher selection motivation, teacher efficacy, teaching satisfaction of prospective health teacher[12][18][19][20][21]. On the other hand, there are few studies on pre-educational programs for prospective health teachers in relation to school field practice.

Therefore, this study attempted to investigate the effectiveness of pre-educational programs as a way to improve the resilience of prospective health teachers for school field practice.

## 1.2. The purpose of the study

The purpose of this study is to develop and apply a pre-educational program for school field training for prospective health teachers and to confirm the difference between before and after the pre-educational program, and the specific research objectives are as follows.

- 1) To develop and apply pre-educational programs for school field training

- 2) To identify the difference between resilience and teacher efficacy before and after implementing the pre-educational program for school field practice
- 3) To identify the satisfaction level of pre-educational programs for school field training.

## 2. Research Method

### 2.1. Research design

This study is a quasiexperimental study with one group pre/post-test design to confirm the difference in resilience and teacher efficacy before and after the pre-educational program for school field practice.

### 2.2. Research subjects

The subjects of this study are students who are going through nursing teaching courses at a university located in D Metropolitan City. They understood the purpose of this study and agreed to participate in it. Considering that clinical practice was conducted bi-weekly among 2nd, 3rd, and 4th-year students who are going through teaching preparation courses, 8 pre-educational programs were conducted for 2nd-year students, excluding 3rd and 4th-year students. Therefore, the number of study subjects was 10.

### 2.3. Research procedure

This study applied the ADDIE model, a general model for educational program development. Based on this, a pre-educational program was developed for school field training for prospective health teachers. It consisted of contents to understand the school field and increase resilience and teacher efficacy <Table 1>.

**Table 1.** Extraction of major tasks required for school field practice.

Category	Main tasks required for school health practice	Grade(A,B,C) (importance/difficulty/frequency)		CVI (.80↑)
		Grade A (over 2)	Grade A&B (1 or more each)	
A. Health room management (5 questions)	1. Establish a health class room budget.	○		Adopted
	2. Manage health records.		○	
	3. Hygiene management and disinfection (directly or indirectly).	○		
	4. Manage health class room medications and supplies.	○		
	5. Manage AED and hand sanitizer in school.		○	
B. Simple nursing treatment (4 questions)	6. Hand over emergency patients to the emergency room.	○		Not chosen
	7. Nursing for faculty and students.	○		
	8. Contact the parents with the results of the patient(Nursing office).	○		
	9. Write a treatment log (grade, class, name, treatment details, etc.).	○		
C. Physical development check-up	10. Conducting a health check-up (physical examination).		○	Not chosen
	11. Working with health survey statistics.	○		

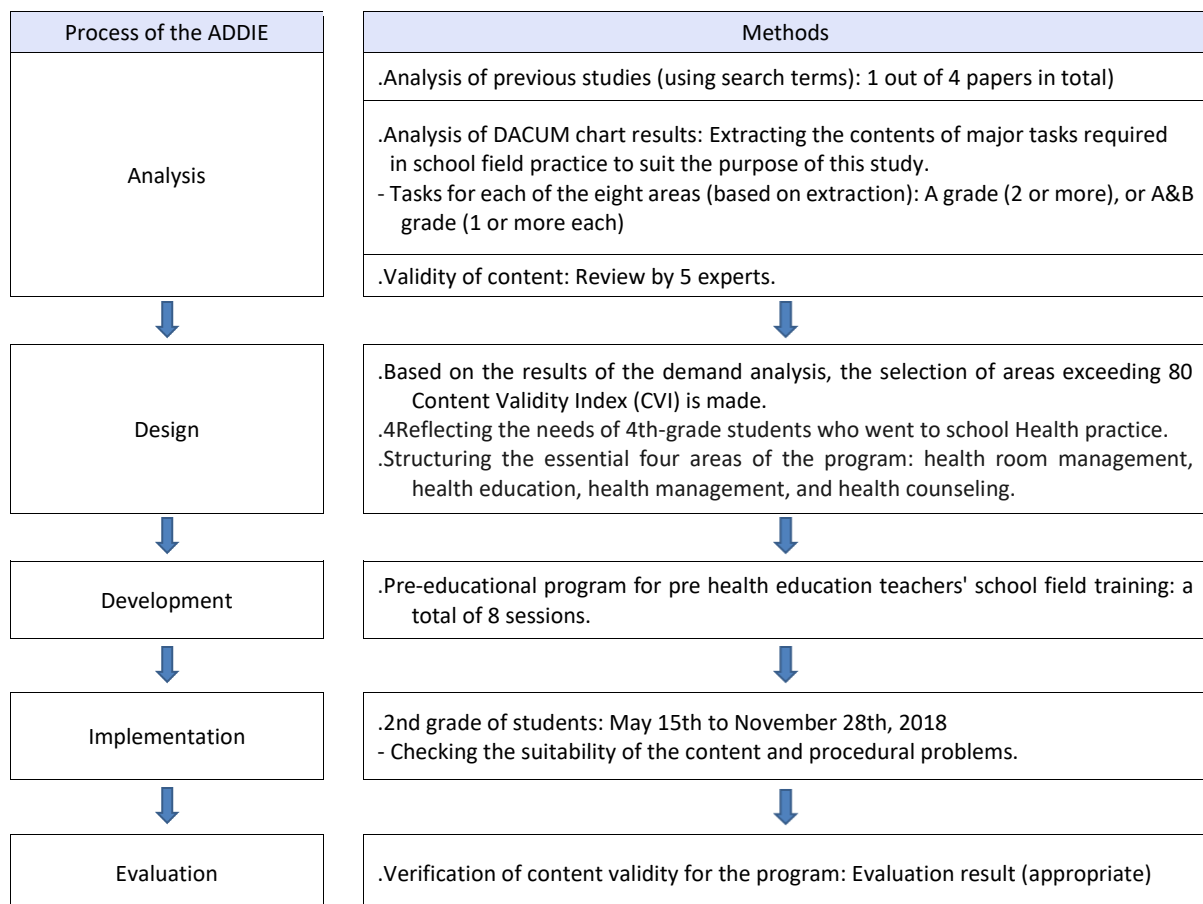
(3 questions)	12. Recording and observing results.		o	
D. Health education (5 questions)	13. Collecting educational materials for health education.	o		Adopted
	14. Making teaching aids for health education.	o		
	15. Check the daily educational plan.	o		
	16. Preparing for health education classes.	o		
	17. To provide health education using learning guidance proposals and educational materials.	o		
E. Health care (6 questions)	18. Preventing and managing children with infectious diseases.	o		Adopted
	19. Guidance on medication for students taking drugs.		o	
	20. Examining unvaccinated persons.		o	
	21. Check health information related to children.		o	
	22. Fill out a tool(questionnaire) for selecting caregivers.	o		
	23. Supporting physical, psychological, and emotional stability of nursing care students.	o		
F. Health counseling (6 questions)	24. Counseling on violence issues.	o		Adopted
	25. Counseling on sexual grievances.	o		
	26. Counseling on family issues.	o		
	27. Counseling on emotional issues.	o		
	28. Counseling for obese students.		o	
	29. Consult with atopic students on how to take care of their skin.		o	
G. Official document management (6 questions)	30. Check the official letter.	o		Not chosen.
	31. Make a plan(draft).	o		
	32. Approval process.	o		
	33. To distribute home correspondence.		o	
	34. To process statistics on home correspondence.	o		
	35. Drawing statistical results.	o		
H. Report child abuse (4 questions)	36. Physical assessment of the possibility of domestic and school violence.		o	Not chosen.
	37. Organizing the School Violence Committee.		o	
	38. Consulting with vulnerable students.	o		
	39. Managing students(family) who need to be managed.	o		

### 2.3.1. Analysis stage

First, in the analysis stage(step 1), based on previous studies, the needs of 4th-grade teaching students(after conducting school field training) were analyzed and reviewed by experts. Based on this, an analysis of the needs of prospective health teachers for pre-educational programs was conducted.

The database of the Korea Educational Research Information Service([www.riss.kr](http://www.riss.kr))[22] was used for the analysis of previous studies. The first target type search term was "prospective health teacher", the second intervention search term was "prospective health teacher & pre-educational program", and the third intervention search term was "prospective health teacher & school field practice." As a result of searching with these keywords, a total of 4 research papers were found. Among them, one(Seo Yo-han, 2016), which is highly related to the subject of this study, was used to analyze the needs of prospective health teachers for programs. In addition, tasks and assignments required to perform school field training were analyzed. Looking at the results of the DACUM (Developing A Curriculum) chart on the practice of prospective health teachers in elementary schools, there are eight areas: healthcare room management, first aid, physical development examination, health education, health care, health counseling, official document management, and reporting of violent children. They were presented in grades A, B, and C by classifying importance, difficulty, and frequency per task item[15]. Based on this, this study extracted the contents of the pre-educational program required for school field training based on tasks with two or more A grades or one or more A and B grades according to the task items for each of the eight areas <Figure 1>.

**Figure 1.** Program development process.



### 2.3.2. Design stage

Based on the results of the demand analysis, areas exceeding .80 of CVI(Content Validity Index) were selected using the four-point scale suggested by Waltz and Bausell[23]. In addition, after reflecting on the results of the survey on the needs of students who went to school field training during the fourth year, the essential areas of the program were structured into four

areas: healthcare room management, health education, health management, and health counseling <Figure 1>.

### 2.3.3. Development stage

Eight sessions of pre-educational programs were developed for school field training for prospective health teachers, focusing on the four essential areas of the program. The time required per session was 1 hour each for the 1st to 6th and for 8th session and 2 hours for the 7th session due to 2 teams' class demonstration. The program composition for each session is as follows.

The first session was held under the theme of "meeting," with the aim of introducing oneself through orientation on the program, activities of the Little Roll Book, and forming a rapport among participants. The second session defined "good teacher" from each perspective under the theme of "cultivating personality." Participants share their thoughts on what kind of teacher they would be with the activity title of "What do I think is a good teacher? What kind of teacher would I like to be?" It was a time to help form a desirable teaching profession through the activities. In the third session, based on the theme of "duty of health education teacher(1)," the overall work related to the school health center, including the structure and function of the school health center, the operation of the school health center, health classes, and health programs, was examined. These are areas adopted as areas of pre-educational programs for prospective health teachers' school field training(A: school healthcare center management, D: Health education, E: Health management). In the fourth session, the theme of "duty of health education teacher(2)" was discussed, and the role of health teachers as educators and health counselors was shared. This included competency-building education(understanding students' developmental stages/prevention of school violence/prevention of obesity, smoking, and drinking alcohol/prevention of game addiction), and sexual violence prevention education including sex-related counseling, etc. This corresponds to F: Health counseling adopted as a pre-educational program area for school field training of prospective health teachers. The fifth session was an "interview with seniors" session, and the participants shared stories related to prospective health teachers told by the fourth-year students(episodes during practice, Q&A, etc.). The sixth and seventh sessions were held on the parts where the fourth-year students had the highest demand. It was "preparing a teaching/learning plan" and "conducting health education" related to health classes.

Since nursing faculty applicants are both teachers and medical personnel, it has been raised that various opportunities for health classes are needed considering their specific situations. This included D: Health Education, which was adopted as a pre-educational program area for school field training for prospective health teachers. The eighth session was a closing session, where participants share their thoughts on the program, and awards were held for outstanding participants <Table 2>.

**Table 2.** Contents of program composition by session.

Session	Topic	Education contents	material	Area(adopted) ※ It has been adopted as a pre-education program area.
1	Meeting (Start button)	.Orientation .Attendance	Operation plan, Attendance	
2	Cultivating personality	.What do I think is a good teacher? .What teacher do you want to be?	A4 paper	



3	Duty of Health education teacher 1	.Work analysis of health education teacher. (Structure and function of the health class room, operation of the health class room, health class, health program)	Hand out	A. Health class room management. D. Health education. E. Health care.
4	Duty of Health education teacher 2	.Competency building education (understanding the developmental stage/prevention of obesity/prevention of smoking and drinking/prevention of game addiction) .Sexual violence prevention education. (operating a sexual grievance and sexual counseling office)	Hand out	F. Health counseling.
5	Interview with senior	.pre health education teacher explanation of senior in fourth grade. (Practice episode, Q&A)	Invite senior	
6	Class preparation	.Writing a teaching and learning plan. (Target: Elementary school student, Topic: CPR & Smoking Prevention, etc.)	(Topic. A4 paper. Health textbook.	D. Health education.
7	Class demonstration	.Conducting health education. (Class consulting: Feedback on strengths and weaknesses)	Things to prepare for the class, photos (e.g., PPT, model, etc.)	D. Health education.
8	Finish (Last button)	.Participation testimonials .Make a certificate and award it	A4 paper, a marker, and 3 colored pens	

### 2.3.4. Execution and evaluation stage

It was conducted from May 15 to November 28, 2018 for the second-year teaching students, confirming that there were no problems in the suitability or procedure of the content. The pre-educational program that went through this review was evaluated by five experts, including one nursing professor, three health teachers, and one school principal, who were experts related to the program and had years of educational experience. As a result of the evaluation, it was deemed as suitable as a pre-educational program for school field practice, and the final confirmed pre-educational program was constructed <Table 2>.

## 2.4. Research tool

### 2.4.1. Resilience

Resilience Belief System, a tool developed by Jew [24], adapted by Kim [25], and modified and complemented by Choi [5], was used as a measure of resilience in this study. Jew [24] divided 12 resilience factors into three groups: activeness acquiring skills, future-oriented, and independence and risk-taking. This scale consists of a total of 45 questions and is a 6-point scale, ranging from 45 to 270 points. The higher the score, the higher the level of resilience beliefs. In the study by Choi [5], the Cronbach's  $\alpha$  coefficient was .897, and for the three sub-areas, they were .741 for activeness acquiring skills, .837 for future-oriented, and .702 for independence/risk-taking. In this study, the Cronbach's  $\alpha$  coefficient was .929, and .903 for activeness acquiring skills, .763 for future-oriented, and .745 for independence/risk-taking.

### 2.4.2. Teacher efficacy

As a measurement tool for teacher efficacy, a survey tool developed by Yi and Kwon[26] was used to measure teacher efficacy suitable for health teachers. This tool consists of the following four factors: 8 questions on instruction efficacy (class, evaluation method, explanation, question, etc.); 7 questions on task-interpersonal efficacy (colleague, manager, legal issue, etc.); 5 questions on community engagement efficacy (community, human and material resources, etc.); and 4 questions on health service efficacy (first aid, health counseling, etc.). A total of 24 questions are scored on a 5-point scale, and the higher the score, the higher the teacher efficacy. In a study by Yi and Kwon[26], there were a total of 26 questions at the time of development, and its Cronbach's  $\alpha$  was .95. instruction efficacy was .92, task-interpersonal efficacy was .90, community connection efficacy was .85, and health service efficacy was .72. The reliability results for 24 questions were not presented. Referring to a study by Kim and Joung [12], Cronbach's  $\alpha$  was found to be .94. In this study, it was .944. instruction efficacy was .863, task-interpersonal efficacy was .894, community connection efficacy was .898, and health service efficacy was .923.

### **2.4.3. Satisfaction**

The study of Kim and Joung[12] used five items for teaching satisfaction. These were developed according to the school situation based on various previous studies related to teaching classes, curriculum satisfaction, and educational satisfaction by two professors in charge of teaching. This was 1: Overall satisfaction, 2: whether it is helpful for learning pedagogical theory, 3: whether it is helpful for future educational activities, 4: whether it is helpful to understand the school field, and 5: whether what has been learned is actually practical. All questions are based on a 5-point scale, and the higher the score, the higher the satisfaction for the pre-educational program. In the study of Kim and Joung[12], Cronbach's  $\alpha$  was .91, and for this study was .948.

## **2.5. Data collection**

The data collection period for this study was from September 4 to November 20, 2019, which was conducted face-to-face.

### **2.5.1. Preliminary research**

The purpose, program content, and method of this study were explained when conducting the preliminary survey. After obtaining written consent for participation in the study, a survey was conducted to measure the general characteristics, resilience, and teacher efficacy of the subjects through a pre-survey. It took a total of 20 to 30 minutes to complete the questionnaire.

### **2.5.2. Experimental treatment**

The experimental treatment was conducted in the nursing department lecture room of the university with a total of eight sessions, three in September, three in October, and two in November, considering the academic schedule, from September 4 to November 20, 2019. The intervention of pre-educational programs for school field training by prospective health teachers was conducted by this researcher with 20 years of experience as a health teacher and professional counselor of the first-degree certificate.

### **2.5.3. Post-survey**

After the completion of the pre-educational program for school field training of prospective health teachers, a survey was conducted to measure resilience, teacher efficacy, and satisfaction with the pre-educational program.

## **2.6. Data analysis**

The data collected in this study were analyzed using the SPSS/WIN 21.0 program as follows. The general characteristics of the study subjects were analyzed by frequency and percentage.

The difference in resilience and teacher efficacy before and after the pre-educational program for school field training of prospective health teachers was analyzed through the Wilcoxon Signed-Rank Test, a non-parametric test method because the sample size was small. Satisfaction with the pre-educational program was analyzed using descriptive statistics.

## 2.7. Ethical consideration

The purpose, method of participation, and confidentiality of the study were explained to the second-year teaching students who participated in this study. Research participants could participate according to their free will, and they could withdraw their participation at any time. It was sufficiently informed in advance that there was no disadvantage in withdrawing the participation. It was re-explained that all collected data would be discarded after the end of the study and would never be used for purposes other than the research. Data were collected after signing the consent form only if these matters were agreed upon.

## 3. Research Results

### 3.1. General characteristics of the study subjects

In this study, the gender of the subjects was 9 women(90.0%). There were two(20.0%) aged 19-20, and four each(40.0%) aged 21-25 and 26 or older. 8 were unmarried(80.0%). All 10 respondents(100.0%) selected "I wanted" for the motivation to select teaching education and career. 8 entered the college right after graduating from high school without the additional year preparing for the college entrance exam(80.0%). For the economic level of the household, 6(60.0%) said in the "middle" class, and 4(40.0%) said in the "lower" class <Table 3>.

**Table 3.** General characteristics of subjects.

Variables	Categories	Frequency(%)
Gender	Male	1(10.0)
	Female	9(90.0)
Age	19-20	2(20.0)
	21-25	4(40.0)
	26 years or older	4(40.0)
Marital status	Y	2(20.0)
	N	8(80.0)
Motives for choosing a teaching profession	I want	10(100.0)
	Parents want	0(0.0)
	Other impacts	0(0.0)
Experience of retaking Korean SAT	Y	2(20.0)
	N	8(80.0)
The economic level of the family	High	0(0.0)
	Medium	6(60.0)
	Low	4(40.0)

Note: N=10.

### 3.2. The difference of resilience and teacher efficacy before and after the pre-educational program

In the area of activeness acquiring skills, which is a sub-area of resilience, there was a significant difference from  $58.80 \pm 2.29$  points in advance to  $69.20 \pm 7.49$  points afterwards ( $Z = -2.81$ ,  $p = .005$ ). In the future-orientation area, there was no significant difference from  $72.90 \pm 1.71$  points in advance to  $71.50 \pm 5.42$  points afterwards ( $Z = -.97$ ,  $p = .331$ ). There was no significant difference in the independence/risk-taking area from  $65.50 \pm 3.56$  points in advance to  $65.50 \pm 6.66$  points afterwards ( $Z = -.15$ ,  $p = .878$ ).

In the teaching efficacy area, which is a sub-area of the teacher efficacy area, there was a significant difference from  $23.70 \pm 4.92$  points in advance to  $28.80 \pm 3.15$  points afterwards ( $Z = 2.54$ ,  $p = .011$ ). There was also a significant difference in the area of task-interpersonal efficacy from  $20.40 \pm 5.03$  points in advance to  $26.00 \pm 4.02$  points afterwards ( $Z = -2.25$ ,  $p = .024$ ). There was a significant difference in community connection efficacy from  $13.50 \pm 3.80$  points in advance to  $18.60 \pm 2.11$  points after death ( $Z = -2.55$ ,  $p = .011$ ). In terms of health service efficacy, there was a significant difference from  $11.30 \pm 4.29$  points in advance to  $15.40 \pm 1.83$  points afterwards ( $Z = -2.04$ ,  $p = .041$ ) <Table 4>.

**Table 4.** Differences in resilience and teacher efficacy before and after pre-education programs are implemented.

Variables	Categories	Pre-test	Post-test	Z	p
		M(SD)	M(SD)		
Resilience	(total)	206.90(6.67)	205.70(18.54)	-.46	.645
	Activeness in acquiring skills	58.80(2.29)	69.20(7.49)	-2.81	.005
	Future-oriented	72.90(2.37)	71.50(5.42)	-.97	.331
	Independence/risk-taking	65.50(3.56)	65.50(6.66)	-.15	.878
Teacher efficacy	(Total)	68.90(15.08)	88.80(10.20)	-2.54	.011
	Instruction	23.70(4.92)	28.80(3.15)	-2.54	.011
	Task-interpersonal relationship	20.40(5.03)	26.00(4.02)	-2.55	.024
	Community connection	13.50(3.80)	18.60(2.11)	-2.55	.011
	Health-service	11.30(4.29)	15.40(1.83)	-2.04	.041

Note: N=10.

### 3.3. Satisfaction with the pre-educational program

In terms of satisfaction with the pre-educational program for school field training of prospective health teachers, the overall average score was 22.80 out of 25 points. For 1. Are you satisfied with the program in general, 2. Was it helpful to learn pedagogical theory, and 4. Was it helpful to understand the school field?, the average score for each question was 4.50 out of 5 points. The score of the question 3. Do you think it will be helpful for future educational activities?" was 4.60 points. The question 5. Do you think what you have learned is actually practical scored 4.70 points, the highest average score among the questions <Table 5>.

**Table 5.** Satisfaction with the pre-educational program.

Variables	Categories	M(SD)	Min~ Max
Satisfaction	(total)	22.80(2.34)	5~25
	1) Overall, are you satisfied?	4.50(.53)	1~5
	2) Does it help you learn pedagogical theory?	4.50(.53)	1~5
	3) Do you think it will be helpful for future educational activities?	4.60(.52)	1~5
	4) Does it help you understand the school scene?	4.50(.53)	1~5
	5) Do you think what you learned is actually available?	4.70(.48)	1~5

## 4. Discussion

This study developed and applied a pre-educational program as a way to improve the resilience of prospective health teachers to school field practice, and then attempted to understand the difference in resilience and teacher efficacy and satisfaction of the pre-educational program.

Looking at the test results on whether the pre-educational program for school field practice brings a difference in resilience, it significantly increased in the area of activeness acquiring skills, a sub-area in post-test compared to the pre-test. There was no significant difference in the area of future-oriented and independence/risk-taking. resilience refers to recuperative power and ability to return to pre-stress adaptation levels[27][28][29]. A person who turns a crisis into an opportunity in a stressful situation can be seen as a person with high resilience[5][30]. Previous studies do not deal with pre-educational programs for school field practice, so it is difficult to directly compare them. However, according to a qualitative analysis of the meaning of school field training experienced by nursing students, nursing students experience the following in preparation for school field training: excitement and anxiety, unfamiliar and awkward situations in school, busy health teachers, children in need of attention and love[2]. In addition, the educational practice for prospective health teachers becomes an opportunity for them to realize their identity. Before they go to the practice site, they are excited about the environmental change of educational institution to the actual field, but on the other hand, they feel a lot of worries, tension, and pressure. For this reason, it is necessary to include teaching contents such as preparation of class plans, class guidance methods, distribution of learning contents, and adjustment of the learning atmosphere before educational practice[9]. These research results raise the need for a pre-educational program to understand the school field and increase resilience before starting school field practice. Research results [5] show that high resilience can better adapt to college life suggest that pre-educational programs can be effective as a way to improve resilience to school field practice. However, for future-oriented, independence, and risk-taking areas, which are sub-areas of resilience, it is thought that the effect can be expected in the post-educational program rather than the pre-educational program. This is because the students reflected on the school field practice after the practice, feeling that they were "necessary educational activities beyond medical treatment," "change and challenge through class practice," and "concern about a career path" [2]. Therefore, the necessity of a post-educational program is also raised.

Examining the test results on whether pre-educational programs for school field training are effective in changing teacher efficacy, instruction efficacy, task-interpersonal efficacy, community connection efficacy, and health service efficacy, which are sub-areas of teacher efficacy, increased compared to the pre-test. It is difficult to directly compare because there are no prior

studies dealing with pre-educational programs for school field training, but among the four sub-areas related to teacher efficacy, there are studies showing high scores in the order of health service, community engagement, task-interpersonal, and instruction efficacy[12]. This is different from the results of this study that showed the order of instruction, task-interpersonal relationship, community engagement, health service efficacy. Considering the recent changes in health teachers' role as a health service provider as well as an educator in charge of health education, pre-educational programs for school field training can be an important intervention to enhance students' teacher efficacy.

In the case of satisfaction with the pre-educational program, the average score for each question was 4.50 points or more in the questions on a 5-point scale(out of 5 points for each question). The average score of all questions was 22.80 out of 25. In addition, the items with high satisfaction scores are listed as follows, in the order of, 5: What I have learned can be used in practice, 3: It will be helpful in future educational activities, 4: It helped me understand the school field, 2: It helped me learn pedagogical theory, 1: I have been satisfied in general. Therefore, it was found that the participants were generally satisfied with this pre-educational program. This can be interpreted that it was an effective program that helped understand the school field and met the purpose of enhancing the resilience for school field practice.

## 5. Conclusion and Suggestion

This study is a quasiexperimental study of a single group pre/post-design attempted to confirm the difference in resilience and teacher efficacy before and after the program was implemented after developing and applying a pre-educational program to systematically operate school field training. As a result of the study, there were statistically significant differences in four areas: activeness acquiring skills, a sub-area of resilience, instruction efficacy, task-interpersonal efficacy, community connection efficacy, and health service efficacy. As a result of analyzing the satisfaction of additional pre-educational programs, it was judged that the pre-educational program was an effective program and met the purpose of understanding the school field and enhancing resilience as one of the systematic educational practice methods. Therefore, it is proposed to apply this as a non-regular educational activity as a pre-educational program for school field training of teacher training institutions. However, since only second-year teaching students at one nursing university were targeted, the number of samples is small and the generalization of research results is limited, it is considered that repeated studies expanding the subjects are necessary. In addition, it is suggested to develop a post-educational program for future-oriented and independence/risk-taking areas, which are sub-areas of resilience that did not show significant differences in this study.

## 6. References

### 6.1. Journal articles

- [2] Shim CS & Choi MJ. A Qualitative Case Study on School Health Practice of Pre-service School Health Teachers in Nursing College. *Korea Entertainment Industry Association*, 7(4), 107-114 (2013).
- [3] Chung MJ & Moon H & Sun CJ & Li DM. Research on School Health Preliminary Teacher's Teaching Practice to the Use of NVivo 10 in Analyzing. *Journal of Korean Public Health Nursing*, 28(3), 574-589 (2014).
- [4] Lee SA & Kim HJ. Pre-service Teachers' Emotional Experiences during Their First Internship: based on the Analysis of American Pre-service Teachers' Reflective Journals. *The Korean Journal of Educational Psychology*, 30(3), 609-634 (2016).
- [6] Cho S. Relationship between Resilience and Disaster Recovery. *International Journal of Human &*

- Disaster*, 2(1), 17-20 (2017). [Article]
- [7] Kim YH. The Effects of National Examination Protection Convergence Education Program on Ego-resiliency, Social Support, and Job-seeking Stress of Senior Nursing Students. *Protection Convergence*, 6(2), 1-13 (2021). [Article]
- [9] Lee KJ & Choi MG. Study Conducted Using Qualitative Research on Teaching Practice Experiences of Pre-service Teachers. *Korea Youth Research Association*, 23(1), 305-333 (2016).
- [10] Kwon JO & Oh JN. Role Expectation and Role Performance in School Health Teachers Recognized by Nursing Students Who Experienced Teaching Practice. *The Korean Academic Society of Nursing Education*, 17(1), 36-43 (2011).
- [11] Kim YS. Teacher's Efficacy Judgment Processes. *The Journal of Curriculum Studies*, 17(1), 333-349 (1999).
- [12] Kim BK & Joung SE. Comparison of Motivation of Choosing a Teaching Profession, Teacher Efficacy, and Satisfaction of Teaching Class by Motivation of Choosing a Teaching Profession Group among Pre-health Education Teachers. *The Journal of Korean Society for School & Community Health Education*, 19(1), 61-70 (2018).
- [13] Kim JB. Strategies of Teachers' Training System for better Education. *The Journal of Korean Teacher Education*, 21(3), 29-47 (2004).
- [14] Kang HS. In Search of the Reflection and Orientation of the Practicum in Korea Teacher Education Program. *The Korean Society For the Study of Teacher Education*, 30(3), 47-74 (2013).
- [15] Seo YH. Job Analysis for Nursing Student in Pre-service Health Education Teacher Practicum using Dacum Method. *The Korea Contents Association*, 16(10), 664-675 (2016).
- [16] Seo DH & Choi MJ. A Study of Role Expectation and Role Performance in School Health Teachers Recognized by Nursing Students. *Korea Entertainment Industry Association*, 8(3), 125-131 (2014).
- [17] Ahn JJ & Kim BJ. Analysis on Recognition and Role Expectation of Nursing College Students Who are Attending a Course of Study for the Teaching Profession Regarding School Health Teacher. *The Journal of Korean Teacher Education*, 29(3), 221-246 (2012).
- [18] Lee GY. Teacher's Choosing Motivation, Teaching Efficacy, Philosophy, and Teacher-student Relationships in Health Teachers. *Journal of the Korean Data Analysis Society*, 17(5), 2751-2765 (2015).
- [19] Lee GO. Analysis of Changes in Motivations of Choosing a Teaching Profession, View of Teaching, and Teacher's Role as Pre-service Health Teacher before and after School Education Practice. *Journal of Learner-centered Curriculum and Instruction*, 19(18), 1-24 (2019).
- [20] Yoo MS & Seo EJ. Awareness of Health Education Environment, Teacher Efficacy, and Job Satisfaction of School Nurses in Korea. *Journal of Korean Public Health Nursing*, 30(1), 42-55 (2016).
- [21] Choi ES & Park CH. Influence of Health Teachers' Efficacy and Role Conflict on School Organization Commitment. *Korean Journal of Teacher Education*, 31(1), 135-153 (2015).
- [24] Jew CJ & Green KE & Kroger J. Development and Validation of a Measure of Resilience. *Measurement and Evaluation in Counseling and Development*, 32, 75-89 (1999).
- [26] Yi CR & Kwon NW. Development of a Teacher -Efficacy Scale for Health Education Teachers-. *Journal of Korean Academy of Community Health Nursing*, 19(2), 247-259 (2008).
- [27] Garnezy N. Resiliency and Vulnerability to Adverse Developmental Outcomes Associated with Poverty. *American Behavioral Scientist*, 34, 416-430 (1991).
- [28] Choi KB. A Study on Stress, Self-esteem and Resilience for Korean Nursing Students' Safety Management. *International Journal of Crisis & Safety*, 4(1), 8-18 (2019). [Article]
- [29] Song KJ & Lee JY. The Effect of Military Life Stress and Ego-resilience on Adjustment of Soldiers. *International Journal of Terrorism & National Security*, 1(2), 19-27 (2016). [Article]



[30] Yeo IG & Lee JB & Kim JY. Effect of Fun of Elderly Women Participating in Health Qigong on Resilience. *Kinesiology*, 6(1), 30-38 (2021). [\[Article\]](#)

## 6.2. Thesis degree

[5] Choi BO. The Effect of the College Students' Resilience Belief on Adjustment to College Life and the Students' Daily Hassles. Yonsei University, Master's Thesis (2017).

[25] Kim JD. Resilience of Adolescent Children with Problematic Drinking Parents. Chungnam National University, Master's Thesis (2003).

## 6.3. Books

[1] Lee GY & Ahn YH & Kim GG. Theory and Practice of the Latest School Health Practice. Dongmunsa (2011).

## 6.4. Additional references

[8] <https://necte.kedi.re.kr/> (2018).

[22] <http://www.riss.kr/> (2018).

[23] Waltz CW & Bausell RB. Nursing Research: Design, Statistics and Computer Analysis. Philadelphia (1981).

# 7. Appendix

## 7.1. Authors contribution

	Initial name	Contribution
Lead Author	JS	-Set of concepts <input checked="" type="checkbox"/> -Design <input checked="" type="checkbox"/> -Getting results <input checked="" type="checkbox"/> -Analysis <input checked="" type="checkbox"/> -Make a significant contribution to collection <input checked="" type="checkbox"/> -Final approval of the paper <input checked="" type="checkbox"/> -Corresponding <input checked="" type="checkbox"/>
Corresponding Author*	KY	-Play a decisive role in modification <input checked="" type="checkbox"/> -Significant contributions to concepts, designs, practices, analysis and interpretation of data <input checked="" type="checkbox"/> -Participants in Drafting and Revising Papers <input checked="" type="checkbox"/> -Someone who can explain all aspects of the paper <input checked="" type="checkbox"/>