

The relationship between career guidance, counseling experience, and adolescents' career maturity development*

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초 록

The purpose of this study was to explore the nature of the subgroups involved in, as well as the changes in the experience of career education by adolescents within school, focusing on the guidance experience from the Career Guidance and counseling Teacher (CGCT), and to compare the tendencies in career maturity development. The longitudinal data sets from the Seoul Education Longitudinal Survey (SELS) conducted by the Seoul Metropolitan Office of Education, which contained the panel data from middle-school and high-school students from 2012 to 2015, Latent Class Growth Analysis (LCGA) and Growth Mixture Modeling (GMM) with known classes were utilized for this study. The results of the analysis were as follows: First, three latent classes were identified within the changes of career education experience from the CGCTs: a “consistently little experience group”, an “increasing experience group”, and a “decreasing experience group”. Second, there were statistically significant differences among the three latent trajectories in terms of adolescents’ self-respect, plans after graduation and school sector of high school. Third, the “increasing experience group” was shown to have the highest initial average but the lowest linear change rate of career maturity. On the other hand, the “decreasing experience group” was found to have the lowest initial average but the highest linear change rate. Based on these findings, we were able to discuss and explore the educational implications for career education and guidance in school.

주제어: career education, career guidance and counseling teacher, career maturity, latent class growth analysis, growth mixture modeling

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I . Introduction

As adolescence is a critical period for career development, making specific career plans for the future is very crucial developmental tasks of adolescents in this life stage (Super, 1990; Super, Savickas & Super, 1996; Zimmer-Gembeck & Mortimer, 2006). Schools are very important venues that influence adolescents' career development as well as their psychological, cognitive and academic development (Roeser, Eccles & Sameroff, 1998; Roeser, Eccles & Sameroff, 2000; Way, Reddy & Rhodes, 2007). In this sense, adolescents' career exploration is significantly affected by a variety of experiences within school.

Career maturity is an important construct and can be used as an indicator measuring the level of career development (Osipow & Fitzgerald, 1996; Whiston, Brecheisen & Stephens, 2003). Career maturity can be defined as “the extent to which an individual has mastered the developmental tasks appropriate to his or her career stage” (Hardin, Leong & Osipow, 2001, p.36). In other words, it means the ability to select one's own career and prepare for the practical career process (Crites, 1978). Thus, it is needed to examine the career maturity of adolescents in order to understand the level of their career development based on the understandings of the self and career guidance.

In accordance with an emphasis of career education within the Korean school system, “Future Career and Occupation” was included in the revised National Curriculum in 2009 as an optional subject and the Career Guidance and Counseling Teachers (CGCT) policy was introduced (Korean Ministry of Education, Science and Technology, 2009). More than one professional counseling teachers have been assigned to all schools nationwide for students' career guidance and counseling since 2014. The qualification of Career Guidance and Counseling Teachers (CGCT) is to obtain the secondary level-1 professional license and abundant teaching experiences of more than 7 years with completion of teacher qualification training with 40 credits (600 hours). Their expected role is to facilitate students' career

development, manage the career education curriculum or programs as a director, and support students who want to get a job or proceed to higher education institution (Jeong, Kim, Seo & Cho, 2012).

Several researches have examined the relationships between career maturity and career guidance within school. There are some studies showing evidence that adolescents' career maturity is closely associated with career education experience such as participation in career-related programs, lectures, small group activities, aptitude tests and counseling (Kim & Kim, 2007; Heo, 2010; Kim & Lee, 2012). In particular, Whiston, Brecheisen & Stephens (2003) have put more emphasis on school counseling system arguing that career interventions without professional counseling teachers revealed the smallest effect, whereas structured counseling groups produced relatively larger effect. Joo, Kang and Choi (2013) reported that career teacher's support had an indirect effect on middle school students' career maturity. On the other hand, some researchers have postulated that there were no clear associations between adolescents' school career education and the development of career maturity (Lee, 2001; Song & Park, 2006; Kim & Yang, 2012).

Based on the analysis of previous studies, many researchers tended to investigate the effect of comprehensive career-related experience on career maturity without consideration of specific types of career guidance within school respectively. Although Kim(2009)¹⁾ and Au(2011)²⁾ explored the influence of career counseling experience on students' career maturity in Korea, there are few empirical studies that focus on the effect of guidance with professional teachers on adolescents' career maturity. Some studies pinpointed that many Korean students still got academic or career guidance with their homeroom teachers or subject head teachers instead

1) Kim (2009) investigated the effect of career counseling experience both within school (professional counseling teachers and homeroom teachers) and outside the school (parents, seniors, etc) on vocational high school students' career maturity.

2) In the Au (2011)'s study, the high school students' general satisfaction in school career counseling affected significantly their career maturity in the university years through the mediating effect of satisfaction in major at university.

of the CGCTs (Lee, Choi, Ko & Lee, 2010). In short, despite the fact that the CGCT policy was introduced to improve the quality of career counseling in school, most of the researches showed a lack of empirical verification. In this regard, it is required to analyze the relationship between adolescents' guidance experience with the CGCT and their career maturity.

Considering career maturity as a standard of adolescents' career development, it is more appropriate to utilize the longitudinal data sets showing patterns of individual changes across time. Furthermore, to capture full information about the large-scale longitudinal data, it is recommended to identify homogeneity in a large, heterogeneous population and heterogeneity within homogeneous subpopulations at the same time (Jung & Wikrama, 2008). In this study, several heterogeneous subgroups in the population were considered based on adolescents' counseling experience with the CGCTs by using latent class growth analysis (LCGA). We also explored the changes of individual career maturity in the same subgroup for four years applying the GMM approach.

The purpose of this study is to find the latent classes for the changes of career education experience within school, especially focusing on the counseling experience with the CGCT and compare the tendency of career maturity development among the subgroups. In addition, the heterogeneity of adolescents' counseling experience suggests different interventions are needed for career development. In this regards, the study examines predictors of membership in the different subgroups. The research questions are as follows.

- 1) How many subgroups are found in the trajectories of adolescents' counseling experience with the CGCT?
- 2) What are the student or school characteristics that can influence differences among the subgroups?
- 3) What are the differences in changing patterns of adolescents' career maturity among the latent trajectory subgroups?

II. Literature Review

1. The Career Guidance and Counseling Teachers

A large number of studies have analyzed the roles and tasks of the Career Guidance and Counseling Teachers(CGCT) since the CGCT policy was introduced (Hong, Ryu & Kim, 2014; Kim, Bang & Jung, 2012; Lee & Song, 2015; Oh, 2014; Park, 2011; Park, An & Cho, 2018; Um & Lee, 2014). Particularly, there has been a line of studies focusing on the perceptions of the CGCT. For example, Hong, Ryu and Kim(2014) have investigated the perceptions of career counseling teacher's roles in middle school based on the qualitative study. To establish CGCT's identity and improve their capability, the research suggested physical environment for career counseling and education, information system for student's private interest and needs, supervision programs, and the security of policy. Oh(2014) also found there were significant differences between the CGCT's perceptions and their performance of tasks based on the analysis of their responses across different school levels.

On the other hand, some researchers have been interested in exploring students' and parents' perceptions toward the CGCTs. Specifically, Kim, Bang and Jung (2012) have identified the perceptions of students and parents. Both students and parents were relatively satisfied with the counseling service provided by career teachers despite their different needs. Specifically, students wanted career teachers to help to explore and identify their aptitudes. Parents prioritized career counseling and guidance as the most important role of career teachers. The results pointed out that the CGCT should provide students with more opportunities of career counseling and guidance and help to actualize their needs.

Along with the studies mentioned above, another line of past literatures analyzed the CGCT's job competency in specific. Park(2011) showed the significant

differences between the current level and future needed level of the CGCT's 15 competencies.³⁾ Lee and Song(2015) analyzed the findings from the literature reviews related to the CGCT's roles and duties, and identified 14 duties and 109 tasks as job competencies using the DACUM⁴⁾. These studies provide useful information for the improvement of job competencies and effective teacher education for the CGCT.

Given the research reviewed above, previous studies have focused on the perceptions of the CGCTs and those of students and parents about CGCT's roles and tasks as well as the analysis of job competencies. Accordingly, no previous studies have attempted to provide empirical justification for the relationship between students' counseling experience with the CGCT and their career development.

2. Factors of influencing Career Maturity

With respect to career maturity, previous studies examined the association between adolescents' individual, home and school variables and their career maturity. First, students' individual characteristics are strong determinants that have an influence on career maturity. Among students' individual characteristics, gender showed a close relation to career maturity. Patton and Creed(2001)'s study

3) The fifteen competencies of the CGCT include career counseling, career development measurement, the understanding of labor market and the knowledge and practical application of career education theory (Park, 2011).

4) The fourteen duties of the CGCT include measurement and application of adolescents' characteristics related to career, career education program management and career counseling for students and parents. Among the 109 task of the CGCT, the characteristics and development process of adolescents, the characteristics of career perception, exploration, planning and preparation among Korean high school students, the concepts, definitions and types of aptitude, interest, personality and value within career education and the quantitative and qualitative assessment to measure individual characteristics related to career decisions (Lee & Song, 2015).

reported that career maturity increased during adolescence and there were large variations in the development of career maturity across gender. In the study, girls were more likely to be indecisive despite their high level of career development knowledge. In some researches(e.g., Jung & Lee, 2005; Park & Seong, 2008) female students were more likely to have higher level of career maturity than male counterpart. In addition, high level of academic achievement (Hwang & Lim, 2004; Kim & Kim, 2007) and positive self-concept (Shin & Kim, 2004; Kim & Kim, 2007) had positive effects on career maturity.

Second, factors related to adolescents' home background such as socioeconomic status(SES), relationship between parents and children, and parent's educational support had significant influences on their career maturity (Roh, 2006; Kim & Kang, 2008; So, 2011). Specifically, Lindstrom et al.(2007) pointed out that family structure variables such as household income, parental education and occupation were influential in the career development of adolescents (Blustein et al., 2002; Lindstrom et al., 2007; Whiston & Keller, 2004). In addition to these family structure variables, family process variables including parental support and parents' expectation in their children's career were also related to adolescents' career outcomes (Lindstrm et al., 2007; Whiston & Keller, 2004; Young & Friesen, 1992).

Third, career maturity is also influenced by school characteristics such as type of school, school activities and career education at school. Jung and Lee(2005) reported that general high school students had higher level of career maturity than students in the vocational school. According to Au(2011)'s findings, students' satisfaction with school career counseling had significant positive influences on their career maturity. Lim and Kim(2011) also found that students' experience of club-activities and student council activities at school had positive effects upon their career maturity.

When it comes to the effect of school career education on career maturity, inconsistent results were shown. Several studies(Choi & Kim, 2012; Kim & Lee, 2012) identified the positive relationship between school career education and

students' career development. The results from meta-analyses studies (Baker & Taylor, 1998; Whiston et al., 2017) indicated that career education programs or career interventions had positive effects on students' career outcome with small-modest effect sizes.

On the other hand, other research suggested that school characteristics variables had no significant effects on the variation of students' career maturity (Kim, 2009; Kim & Yang, 2012). In addition, Legum & Hoare (2004) found non-significant effects of the 9-week career education program for at-risk middle school students on their career maturity. They recommended that the duration of career counseling programs should be increased so that students could have more exposure to the intervention. Referring to Powell and Luzzo (1998)'s findings, non-significant results may be caused by a simple or uniform aspect of career education within school. Given this inconsistency in the study results regarding school career education and career maturity, this study tried to capture the relationship between various school characteristics and career maturity.

III. Method

1. Subject

This study used the panel data of middle school students from 2012 to 2015, which were from the longitudinal data sets from the Seoul Education Longitudinal Survey (SELS) conducted by the Seoul Metropolitan Office of Education. SELS is designed to track three panels: fourth graders in elementary school, first graders in middle school, and first graders in high school each year from 2010 until 2018. A total of 4,544 first-grade students from 74 middles schools in Seoul took part in the first wave of SELS in the middle school panel. Because some questions about the CGCT started to be included in the third wave of survey(2012), we used the panel

data sets from the third wave to sixth. The participants in this study were third-grade middle school students in 2012, and accordingly, were third-grade high school students in 2015. After including data with the response on the experience of career guidance with the CGCT at more than three time points throughout four years, 3,369 students were selected for the analysis. Male and female adolescents comprised of 53.1% and 47.9% of the participants respectively. With regard to school type, subjects were categorized into vocational high schools (14.3%, n=483) and regular academic high schools (85.7%, n=2886).

2. Variables

1) Career Guidance Experience from the CGCT

Participants were asked whether they had experience of career guidance with the CGCT within school from 2012 to 2015. To measure the career guidance experience from the CGCT, the current study used the dichotomous variables (had experience=1, no experience=0) at four time points.

2) Control variables

Control variables consisted of students' individual and school characteristics. To our knowledge, there are no studies that have explored the factors influencing adolescents' career counseling experience. Based on the previous studies related to career maturity and career preparation behaviors, exploratory variables related to students' individual and school characteristics were included in the multinomial logistic regression as covariates.

More specifically, student characteristics included gender, family background variables, academic achievement, psychological traits, perceived level of career information and future plans after graduation. First, gender was dummy coded

with female=1 and male=0. Second, as family background variables, the family SES was calculated by the mean of z-scores of parents' level of education, which was transformed into the years of education, and the natural log value of annual household income. Both parent-child relationship and conversation with parents were measured by seven and six items respectively. Third, academic achievement was calculated by averaging students' vertical scale scores of Korean, Math and English at middle school third year. Dichotomous variables of the family SES and academic achievement were used in the analysis. Fourth, adolescents' psychological traits such as self-esteem and achievement goal orientations were included in the model. Fifth, as students' perceived level of career information may have a close relationship with their career counseling experience, it was also used in the analysis. Lastly, students were required to respond their future plans with three categories: no plan, getting a job, and proceeding to university. Using students with 'no future plan after graduation' as a reference group, 'getting a job' and 'proceeding to university' were included as dummy coded predictors in the analysis.

As school characteristics, the type of school was also included as covariates, which was dummy coded, with vocational schools coded 1 and regular academic schools coded 0.

3) Career Maturity

SELS used eight items to measure the career maturity of Korean middle school and high school students. Sample questions about career maturity, for example, "I know what kind of work that I like", "I have ever searched specific information about the career that I have some interests," and "I decide my career (major or job) all by myself" were included in the questionnaire. Responses ranged from (1) "not at all" to (5) "very much". This study used the average scores of all eight items. Cronbach's alpha for this scale showed a high level of internal consistency: 0.92 in the 2012 data set, 0.90 in 2013, 0.91 in 2014, and 0.91 in 2015 respectively.

3. Data Analysis

This study utilized Latent Class Growth Analysis (LCGA) to identify the latent classes of school career counseling experiences with the CGCT. LCGA is one of the methods to analyze growth and changes in longitudinal studies and make it possible to classify distinct subsets of individuals whose growth trajectories are similar within each class.

Several tests of model fit were used in this study to decide the number of latent classes; AIC(Akaike Information Criteiron)(Akaike, 1974), BIC(Bayesian Information Criterion)(Schwartz, 1978), SSABIC(Sample-Size Adjusted Bayesian Information Criterion (Sclove, 1987), Entropy (Hix-Small et al., 2004), the Lo-Mendell-Rubin likelihood ratio test (LMR-LRT, Lo, Mendell & Rubin, 2001), and the bootstrapped likelihood ratio test(BLRT, Arminger, Stein & Wittenberg, 1999) statistics. In general, a model with smaller AIC, BIC and SSABIC values indicates a better model. Higher entropy values, which range from 0 to 1, represent more accurate classification. The LMR-LRT and BLRT statistics compare model fits between the current model(k) and the model with one less class(k-1). If the p value of statistics is significant, it means that the k-class model is more plausible than the k-1 class model. For successful convergence, no less than 1% of total count in each class is also considered (Jung & Wickrama, 2008).

Relevant variables which have significant effects on the guidance experience trajectories were also identified by multinomial logistic regressions. In addition, GMM(Growth Mixture Modeling) with Known class was employed to estimate students' career maturity based on the latent classes. GMM is a method to capture the heterogeneity of longitudinal growth in unobserved latent classes. Each latent class has its own unique growth trajectories with parameters such as average intercept, slope and variances (Jung & Wickrama, 2008). In GMM, the statistical significance of the growth parameters can also be tested. An EM algorithm was employed to account for missing values. All statistical analysis in this study was

conducted with SPSS 23.0 and Mplus version 7.11 (Muthén & Muthén, 1998–2012).

IV. Results

1. Trajectories of Career Guidance Experience from the CGCT

The descriptive statistics of the variables used in this study are presented in Table 1.

Table 1

Descriptive Statistics of Variables

Variables		n	M(SD)	Cronbach's α (number of items)
<dependant variables>				
career maturity (middle school 3 rd year)		3,369	3.86(0.72)	0.917(8)
career maturity (high school 1 st year)		3,369	3.89(0.68)	0.899(8)
career maturity (high school 2 nd year)		3,369	3.85(0.66)	0.908(8)
career maturity (high school 3 rd year)		3,369	3.88(0.65)	0.913(8)
<independent variables>				
career guidance experience (middle school 3 rd year)		896	.27(0.44)	
career guidance experience (high school 1 st year)		795	.24(0.43)	
career guidance experience (high school 2 nd year)		873	.26(0.44)	
career guidance experience (high school 3 rd year)		761	.24(0.43)	
student characteristics	female	3,369	.47(0.50)	
	family SES	3,369	.00(0.58)	
	academic achievement	3,369	555.65 (33.22)	
	self-esteem	3,369	3.65(0.79)	0.919(5)
	parent-child relationship	3,369	3.58(0.77)	0.897(7)
	conversation with parents	3,369	3.54(0.81)	0.875(6)
	achievement goal	3,369	3.58(0.76)	0.868(6)
	level of career information	3,369	3.30(0.89)	0.914(4)
future plan after graduation	getting a job	416	.12(0.33)	
	proceeding to university	2,590	.77(0.42)	
	no plan	363	.11	
type of school	vocational high school	483	.14(0.35)	
	regular academic high school	2,886	.86	

As shown in Table 1, approximately only a quarter of participants had career guidance experience with the CGCT. More specifically, 896 middle school students had experience of career guidance in 2012 and 761 high school students had career guidance experience in 2015. Regarding the pattern of development, the level of adolescents' career maturity was similar across the years.

To identify different trajectories of adolescents' career education experience regarding career guidance and counseling from the CGCT within school, LCGA was conducted. Table 2 represents model fit statistics for 2 through 5 classes that estimated the trajectories. The best fitting model, as indicated by the BIC(17103.47) and entropy value(0.793), was the three-class model even though four-class model showed smaller AIC. The model also showed a significant p values for Lo-Mendell-Rubin likelihood ratio test(LMR-LRT) and Bootstrapped Likelihood Ratio Test(BLRT)($p < .001$). Therefore, three trajectories of adolescents' career guidance experience with the CGCTs over time were identified: 'consistently little experience group'(n=2782, 82.6%), 'increasing experience group'(n=497, 14.8%) and 'decreasing experience group'(n=90, 2.7%).

Table 2

Model fit statistics to determine the number of latent classes

Number of Classes	AIC	BIC	SABIC	Entropy	LMR LRT P value	BLRT P value
2	17134.11	17170.85	17151.78	0.667	<.001	<.001
3	17048.37	17103.47	17074.88	0.793	<.001	<.001
4	17046.40	17119.87	17081.74	0.779	<.001	<.001
5	17048.11	17139.95	17092.29	0.749	0.36	0.67

Figure 1 provides a summary of the pattern of each latent class according to the change of the adolescents' guidance experiences with CGCTs. The X-axis represents time points and the Y-axis shows whether students had experience of career guidance with the CGCTs. The majority of respondents were included in

the ‘consistently little experience group’, revealing a steadily low level of guidance experience with the CGCT. Those in the ‘increasing experience group’ showed a gradually increasing pattern of experiences. On the other hand, the ‘decreasing experience group’ tended to have opportunities to get the guidance with the CGCT in middle school but the experience was rapidly reduced in the high school years over time.

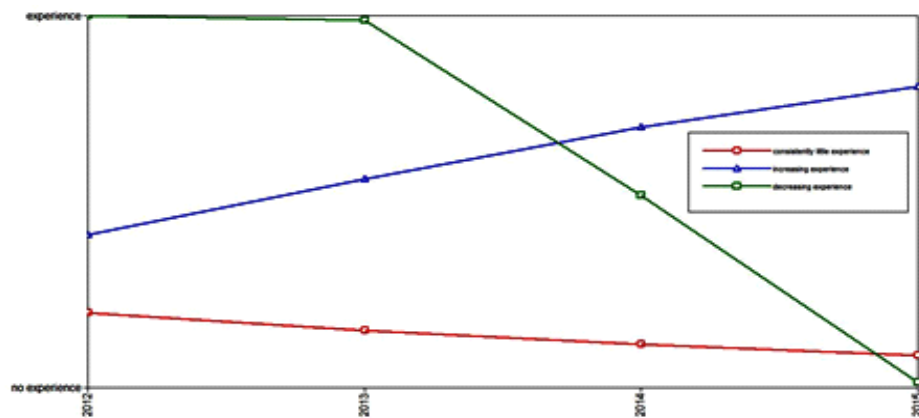


Figure 1. Changing patterns of subgroups in the CGCT's counseling experience

2. Predictors of Subgroup membership

We examined predictors of latent class membership with respect to three trajectories of career guidance experience from the CGCT. A variety of students' background characteristics such as gender, the family SES and academic achievement, psychological factors including self-esteem and achievement goal orientations, parent-regarding factors, the level of perceived career information, future plan after graduation and type of school were included in the multinomial logistic regression model(Table 3).

Table 3

Multinomial logistic regression results for the characteristics of subgroups

Subgroups Variables		Consistently Little Experience Group vs Increasing Experience Group		Consistently Little Experience Group vs Decreasing Experience Group		Increasing Experience Group vs Decreasing Experience Group	
		Est. (S.E)	Exp(B)	Est. (S.E)	Exp(B)	Est. (S.E)	Exp(B)
Student characteristics	Female	-0,117 (0,100)	0,890	-0,318 (0,227)	0,728	-0,201 (0,243)	0,818
	Family SES	-0,141 (0,104)	0,868	0,150 (0,223)	1,162	0,291 (0,240)	1,338
	Academic achievement	0,010 (0,099)	1,010	0,030 (0,218)	1,031	0,021 (0,234)	1,021
	Self-esteem	-0,170* (0,075)	0,844	-0,197 (0,161)	0,821	-0,028 (0,173)	0,972
	Parent-child relationship	0,043 (0,117)	1,044	-0,232 (0,255)	0,793	-0,276 (0,274)	0,759
	Conversation with parents	0,003 (0,113)	1,003	0,285 (0,249)	1,330	0,282 (0,267)	1,326
	Achievement goal	0,140 (0,084)	1,150	0,251 (0,182)	1,285	0,111 (0,196)	1,117
	Level of career information	-0,007 (0,067)	0,993	0,021 (0,143)	1,021	0,028 (0,154)	1,029
Future plan after graduation	Getting a job	-0,844*** (0,258)	0,430	1,118*** (0,432)	3,060	1,963*** (0,486)	7,119
	Proceeding to university	-0,791*** (0,221)	0,454	1,554*** (0,257)	4,729	2,344*** (0,327)	10,424
Type of school	Vocational school	-0,777*** (0,160)	0,460	0,156 (0,385)	1,169	0,933* (0,406)	2,543

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

Among student characteristics, students who reported high level of self-esteem were likely to have significantly lower probabilities(0,844 odds) of being in the increasing experience group after controlling for covariates. Jung(2010) found that adolescents' self-esteem had a positive influence on their career decision-making self-efficacy. The results show that students with high level of self-esteem and high

level of career decision making self-efficacy would presumably tend to have a low necessity of career counseling. In addition, student's future plans after graduation, getting a job and proceeding to university, were significant determinants of the subgroups after controlling for covariates. Specifically, Students with specific plans after graduation such as getting a job or going to university had higher probabilities(3.060 and 4.729 odds respectively) of being included in the 'decreasing experience group' in comparison with those with no plan after graduation. The pattern of decreasing experience group represents the high frequency of counseling experience with the CGCT in middle school rapidly decreased in high school. It is possible that students determined their career plans through counseling experiences during middle school. On the other hand, there is a possibility that those who have specific plans related to their career tended to have relatively lower needs for career counseling in high school. However, students' gender, family backgrounds, academic achievement and psychological factors did not significantly affect the classification of subgroups in this study.

In terms of school characteristics, the students of vocational high schools had a lower likelihood(0.460 odds) of being members of the 'increasing experience group' compared to those in regular academic high schools. Regarding the career education across the types of schools, Oh(2014) identified the differences in perceiving the importance of CGCT's tasks among middle school regular academic high school and vocational high school teachers. Specifically, the CGCTs in middle school and regular academic high school prioritized their roles of counseling and consulting students' career. However, those in vocational high school prioritized other tasks related to career education. In addition, the contents of counseling with the CGCT are mainly related to exploring the information of college majors (Kim, Bang & Jung, 2012). In this sense, the findings show the tendency of students in vocational high school who prefer to get a job and have more determined career plans after graduation, which in turn predicts reduced needs for career counseling.

3. Career Maturity Development in the Subgroups

To explore the development of career maturity in each subgroup, GMM with three-class was utilized in this study. Table 4 represents the results of the analysis from a linear model and a quadratic model. When it comes to applying a linear model, all of the average initial levels and change rates in each subgroup were statistically significant with an exception of linear change rate in the 'consistently little experience group'.

Table 4
Development of career maturity in each subgroup

Model		Consistently Little Experience Group	Increasing Experience Group	Decreasing Experience Group
		Estimate(S.E.)	Estimate(S.E.)	Estimate(S.E.)
Linear Model	Initial level	3,866 ^{***} (0,015)	4,513 ^{***} (0,117)	2,736 ^{***} (0,558)
	Linear change rate	0,012 (0,007)	-0,469 ^{***} (0,086)	0,483 ^{***} (0,112)
Quadratic Model	Initial level	3,989 ^{***} (0,148)	3,868 ^{***} (0,014)	3,751 ^{***} (0,191)
	Linear change rate	-1,377 ^{***} (0,251)	-0,012 (0,016)	1,126 ^{***} (0,228)
	Quadratic change rate	0,509 ^{***} (0,074)	0,007 (0,005)	-0,452 ^{***} (0,061)

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

The initial level of 'increasing experience group' was the highest (4,513) and the linear change rate was -0,469 in the linear model. On the other hand, 'decreasing experience group' had the lowest initial level(2,736) and the highest linear change rate(0,483) in the linear model. When applying a quadratic model, the initial level of the 'consistently little experience group' was the highest (3,989) and each linear

change rate and quadratic change rate was -1.377 and 0.509 , respectively. Additionally, 'decreasing experience group' had a relatively lower intercept (3.751) but the highest linear change rate(1.126) with quadratic change rate of -0.452 . On the other hand, both linear and quadratic change rate of the 'increasing experience group' were not statistically significant. The patterns of career maturity development in three subgroups were represented graphically in figure 2.

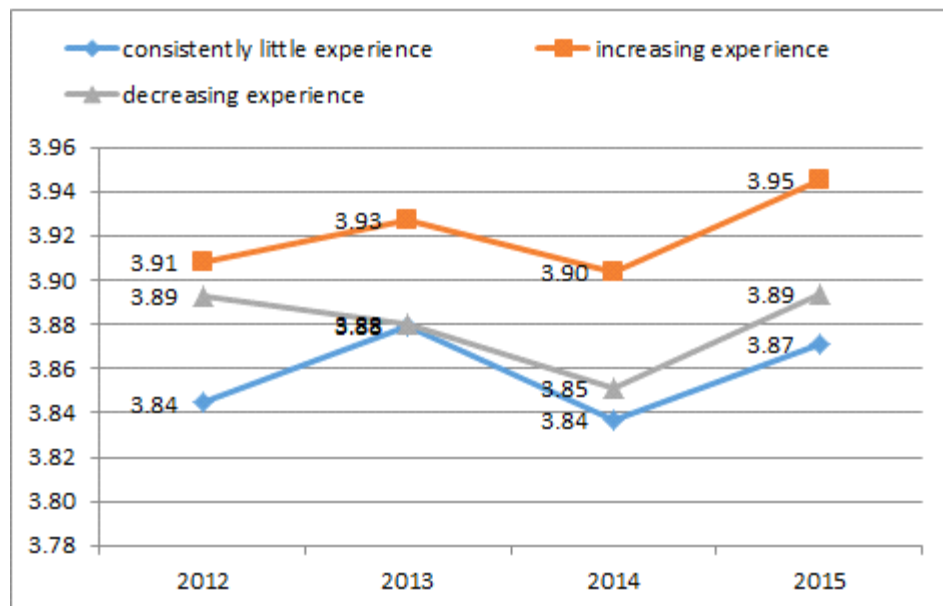


Figure 2. Development of career maturity in three subgroups

V. Discussion

The main purpose of current study is to examine the heterogenous subgroups of adolescents' school career experiences, the predictors of the subgroup membership and the development of career maturity in each subgroup. Major findings are summarized as follows.

First, this study identified three subgroups based on the adolescents' school career experiences, particularly, guidance and counseling with the CGCTs during four years. The subgroups were 'consistently little experience group(82.6%)', 'increasing experience group(14.8%)', and 'decreasing experience group(2.7%)'. The consistently little experience group had few or almost no opportunities to counsel with the CGCTs within school throughout the years. The students in the increasing experience group had few chances to receive career guidance from the CGCTs in middle school while their experiences steadily increased in high school. On the other hand, those in the decreasing experience group had a few experience to obtain guidance from the CGCTs in middle school but their experiences rapidly decreased to the degree of almost no experience. This classification implies that adolescents still might have a different level of career guidance experience with the CGCTs.

Ryu, Hong and Kim (2015) suggest that school counseling teachers are requested to inform students of their unique work and try to perform their roles more actively despite practical difficulties at school and a lack of awareness of the CGCT's important roles. However, we found that a huge number of students rarely got a counseling with the CGCT in their schools. Most of the students (82.6%) belonged to the consistently little experience group even though the CGCT policy was actively enforced. Our findings are in consistent with the previous research reporting that more than half of students did not have a counseling experience with the CGCT (Kim, Bang & Jung, 2012). It is because that a number of Korean students usually got a career counseling from their homeroom teachers, head teachers and teachers of private education institutions (Lee et al., 2010). The result implies that more opportunities of career counseling with the CGCTs should be offered to students based on their educational needs.

Second, to better understand the trajectories related to the experience of guidance and counseling with the CGCTs, the associations between background variables and each latent class were examined. Specifically, students' self-esteem,

future plans after graduation and vocational schools were significantly related to their subgroup memberships. Interestingly, the findings point out that students who have specific plans after graduation tended to belong to the decreasing experience group. Depending on the type of school, the students in vocational high schools were less likely to belong to the increasing experience group compared to those in academic high schools. This finding indicates that the students with relatively determined career plans were less likely to get guidance and counseling from the CGCTs. The result also shows that students determined their career plans after the counseling experience with the CGCTs in middle school. Further analysis using longitudinal data is required to draw a causal relationship between students' background variables and their counseling experiences.

Third, we found the general pattern of career maturity development. Specifically, the level of career maturity except for the decreasing experience group somewhat linearly increased from middle school, with the lowest value in the second year of high school(2014), and increased afterwards. These findings are supported by previous research revealing that there was no significant relationship between age or grade and the level of career maturity (Fouad, 1988; Powell & Luzzo, 1998), despite a few Korean studies reporting an incremental increase in career maturity with age (Heo, 2010; Kim, 2009; Shin & Lee, 2011).

Fourth, regarding the development of career maturity in each subgroup, the increasing experience group in comparison with the other two subgroups showed a steadily higher level of career maturity throughout the years. The consistently little experience group revealed the similar pattern of career maturity development as increasing experience group with the lowest values of career maturity at all time points. As the counseling experience with the CGCTs declined in the decreasing experience group, the level of career maturity also showed a decreasing pattern from 2012 to 2014. In contrast, the level of career maturity of students in the increasing experience was likely to increase. The findings of

relevant research are consistent in that career choice interventions at school such as a counseling experience with the CGCTs are reported to be associated with the adolescent development of career maturity (Whiston et al., 2017).

There are several limitations in this study. First, there is a potential difficulty in thoroughly investigating the effect of career counseling with the CGCT on adolescents' career maturity development by tracking their guidance and counseling experience with the CGCT. To fully understand the effect of the career counseling from the CGCT on career maturity, further investigations should consider the duration, frequency, types of career counseling as well as the environment regarding career counseling. Second, this study relied heavily on the analysis of self-reported data, which was likely to have potential problems of inaccurate information. As a result, as the descriptive statistics indicated, there might be little difference in career maturity among different subgroups. This is consistent with the criticism regarding the measures of career maturity with diverse populations (Whiston et al., 2017). There is a need for further research including a qualitative study to explore adolescents' career maturity. Third, the findings using the SELS data might be different in other regions. Therefore, an analysis with nationally representative data sets is needed to identify the relationship between career maturity and counseling experience more accurately. In addition, future research should examine whether the trajectories are different across populations of students.

Despite these limitations, this study contributes to the empirical evidence for the change in adolescents' guidance and counseling experience with the CGCTs across heterogeneous subgroups as well as the effect of the CGCT policy on their career maturity after the policy was introduced. For the CGCTs to provide students with more opportunities of individualized counseling and support, more school resources should be allocated to encourage them to participate in teacher training programs to develop their counseling competency, ultimately for effective career education in school.

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초 록

진로·진학 상담교사와의 상담 경험이 청소년의 진로성숙도 발달에 미치는 영향

김나영* · 김전옥**

이 연구의 목적은 단위 학교 내 진로·진학상담교사와의 상담경험의 발달양상에 따른 잠재계층을 탐색, 확인하고, 청소년들의 진로 성숙도의 변화를 종단적으로 살펴보는 데에 있다. 이를 위해 서울시교육종단연구(SELS)의 중1 패널자료의 3차년도(2012년)~6차년도(2015년)자료를 활용하였다. 주요 연구결과는 다음과 같다. 첫째, 잠재성장 계층분석(Latent Class Growth Analysis, LCGA)을 실시한 결과, 청소년의 진로·진학상담교사와의 상담경험에 대한 발달양상으로 3개의 잠재계층(낮은 경험집단, 경험 증가집단, 경험 감소집단)을 확인하였다. 둘째, 다항로지스틱 분석(multinomial logistic regression)을 실시한 결과, 청소년의 자아존중감, 졸업 후 계획, 학교 유형이 이러한 잠재계층에 유의한 영향을 주는 것으로 나타났다. 셋째, 세 가지 잠재계층에 따른 진로성숙도의 변화를 살펴보기 위하여 다집단 성장혼합모형(Growth Mixture Modeling, GMM with known class)을 활용하여 분석한 결과, ‘경험 증가집단’의 진로성숙도 초기값이 가장 높게 나타났고, 변화율은 매년 감소하는 것으로 나타났다. 반면, ‘경험 감소집단’의 경우 진로성숙도의 초기값이 가장 낮게 나타났으나 변화율은 매년 가장 크게 증가하는 것으로 나타났다. 이러한 연구결과를 바탕으로 단위학교의 진로교육에 대한 시사점에 대해 논의하였다.

주제어: 진로교육, 진로진학상담교사, 진로성숙도, 잠재계층 성장분석, 다집단 성장혼합모형

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