

## Abstract

# **Korean Education Longitudinal Study(KELS2005): An Analysis of the Lives and Achievements of Early Adulthood after Graduating from High School(III)**

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On the theme of “the Lives and Achievement of Early Adulthood after Graduating from high school(III)”, we conducted descriptive analyses on changes of learning features that students experienced through middle schools, high schools, and colleges using the data of “The Korean Education Longitudinal Study 2005’ collected from the 1st to the 9th survey. Also, we conducted in-depth analyses which include three topics: (1) latent class analysis on changes in career maturity of early adulthood that includes all possible types of subjects, college students, employees, and job seekers, (2) relations between college students’ school drop out intention, adaption to college, and sense of belonging, (3) level of college students civic consciousness and its influencing factors. Based on these analyses, the present study aimed to broaden understandings on early adulthood’s major development tasks, and to present related policy suggestions.

In part II, we investigated how students’ learning features changed through middle schools, high school and colleges. Among motivational preferences, intrinsic motivation increased as students advanced to the higher grade, while instrumental motivation decreased. Among self-determinations, external regulation motivation increased as students advanced

to the higher level of education (i.e., from middle school to college), and female students showed more increase than male students. Introjected motivation decreased as grade advanced. In middle school, female students' introjected motivation was higher than that of male students, but the rate of decrease was also significant and substantial, thus, the gap between females and males decreased as students advanced to the higher level of education. Identified regulation motivation showed ascending pattern as students promoted to the higher level of education, and for amotivation, male students showed decreasing pattern but female students showed increasing pattern.

Among learning goal orientations, mastery approach, mastery avoidance, and performance avoidance increased as students advanced to the higher level of education, but performance approach indicated different variation patterns by genders. In case of female students, performance-approach level increased while male students' performance approach level decreased.

For both male and female students, expectations on control increased as students advanced to the higher level of education- the rate of increasing was greater for male students than for female students. For male students in middle school, preference for cooperative learning was higher than it was for female students in the same age. Additionally, male students' preference for cooperative learning increased as they promoted to the higher level of education, but female students' preference decreased. On the other hand, preference for competitive learning decreased in both genders as they advanced to the higher level of education. For self-efficacy, both genders showed increasing pattern as they advanced to the higher level of education. Self-efficacy of female students in middle school was lower than that of male students, and so was growth rate for female students.

Among cognitive control strategies, rehearsal showed decreasing pattern, and the growth rate was lower for male students than that of female students. Elaboration, meta-cognition, and organization strategy increased as students advanced to the higher level education.

Among behavioral control strategies, effortful control increased by school level, but time management level decreased. For both genders, growth rate of spatial management showed increasing pattern as they advanced to higher level of education, but it was found that female students in middle school had higher spatial management strategy level than male students did. For teacher's help and utilization level, response level in middle school

seemed to remain similarly until students became college students, while friends' help and utilization level increased as they grew older. Especially female students had higher level of friends' help and utilization, but growth rate was lower than male students. Resource utilization strategy increased by school level, and the growth rate of female students showed higher than that of male students.

In part III, we investigated change in early adulthood's career maturity, which consisted of planning, career attitude, self-understanding, and career behavior by employing growth mixture modeling based on latent class analysis. Also to explain differences among latent classes, we analyzed differences among latent classes in various background variables such as family, personal characteristics and experiences, career path plan, high school's trait and experience, and career exploration behaviors.

First of all, we found that latent classes existed in terms of change in early adulthood's career maturity—three latent classes in the over all career maturity, and two sub-factors of career maturity, 'planning', and 'career behavior', and two latent classes in 'career attitude' and 'self-understanding.' These latent classes can be classified by referring to changing patterns. Three latent classes discovered in 'planning' and 'career behavior' were classified into (1) group with the highest initial status and increasing in lowest growth rate, (2) group with intermediate level initial status and increasing in intermediate level growth rate, and (3) group with the lowest initial status and increasing in the highest growth rate. Two latent classes in 'career attitude' were classified into (1) group with the highest initial status and decreasing in the lowest growth rate, and (2) group with the lowest initial status and decreasing in the highest growth rate. For self-understanding, two latent classes were classified into (1) group with the high initial status and group with the low initial status though the changes over time were not statistically significant in the two classes. For career maturity, three groups were described as (1) group with the highest initial status and increasing with the lowest growth rate, (2) group with intermediate initial status and no significant change over time, and (3) group with the lowest initial status and increasing in the highest growth rate.

We conducted analyses on the factors that affect latent class classification of each dependent variable. Among family background variables, parents academic support had significant effects on latent class classification in career attitude and self-understanding,

and parents' education and parental involvement had significant effects in career behavior. Among personal feature and experience variables, gender and self-conception affected latent class classification in the overall career maturity and all sub-factors of career maturity and relationship with teacher turned out to be affecting latent class classification in the overall career maturity and sub-factor, career planning. In career planning, intention to college education affected latent class classification in all sub-factors except for overall career maturity and career attitude. Also, expected education level was analyzed as an influential variable to latent class classification in career behavior and overall career maturity.

Among variables related to high school features and experiences, latent class classifications in planning, career attitude, and career behavior were significantly affected by the high school type. Also, club activities during middle and high schools affected latent class classification in career behavior and overall career maturity. Lastly, career development activities and career education in high school had significant effects on latent class classification in planning and overall career maturity. Whether students experienced career exploration while they attended high school affected latent class classification in career attitude, and career counseling was analyzed as an influential variable to latent class classification in career behavior.

In part IV, we examined influential factors to college students' drop-out planning focusing on college adaption and sense of belonging. Considering panel data characteristics of 「The Korean Education Longitudinal Study 2005」, we applied random effect modeling, and examined independence assumption between independent variables and individual effects through Hausman(1978) test. In the case of variables that possibly have an endogenous problem, within and between effects were estimated separately. After above procedures, in the final model, we analyzed if sense of belonging to college actually mediated college adaption to influence students' drop-out planning.

It appeared that college adaption affected negatively to students' drop-out planning, while interaction variable between college adaption and grade advance in college affected positively. For lower graders, the effect of college adaption to drop-out planning had negative value, but for higher graders, it was analyzed to have positive value. It was suspicious if sense of belonging to college was related to individual effect, thus within and between

effects were estimated separately, both showed negative influence to drop-out planning.

College adaptation affected negatively to college drop-out planning in model C that did not include sense of belonging within, and in model A that examined whether college adaptation affected sense of within, it was analyzed to have positive influence. In models B and C' including both college adaptation and sense of belonging to college within, both were analyzed to have negative affect. Based on estimation of a 95% confidence level using bootstrap, the direct and indirect, and total effects were all analyzed to be statistically significant. With lower high school GPA in the third grade, college transfer planning increased, but it appeared not to influence drop-out planning. On the other hand, average score of Korean, Mathematics, and English in Korean SAT did not significantly affect college transfer planning but affected drop-out planning positively.

Lifetime goal related to self-growth positively affected to college students' drop-out planning. Interaction with professors was analyzed to be a factor that increases college students' drop-out planning. Students in higher grades were analyzed to have lower drop-out planning than lower grade-students. Also, in case that current college was less desired one, students' drop-out planning hiked and as students' major and aptitude match well, their drop-out planning decreased. Lastly, study negligence had positive influence on college students' drop-out planning.

In part V, college students' civic consciousness and its influencing factors were analyzed. College students' civic consciousness level was generally higher than job seekers or employees, and sub-factors of civic consciousness' such as tolerance consciousness, social participation consciousness, volunteer consciousness, and ethical consciousness were also higher in college students. Especially, college students showed higher level of overall civic consciousness, tolerance consciousness, social participation consciousness, and ethical consciousness than employed college students. For college students, social participation consciousness level was the highest, and for employed college students, volunteer consciousness level was the highest.

Meanwhile, gender did not affect general civic consciousness but among sub-factors only tolerance showed sexual difference - higher level of tolerance in male group, and difference according to family SES level was not found. Rather than family SES, parents' emotional support during middle and high school years and Korean SAT grade in high

school 3rd grade affected positively civic consciousness level. Regarding sub-factors of civic consciousness, parents' emotional support positively influenced social participation, volunteer, and ethical consciousness, and Korean SAT grade in high school 3rd grade and college GPA positively influenced social engagement and ethical consciousness.

Also, among variables related to middle school and high school life and experience, relationship with friends and time spent on reading appeared to have positive influence on general civic consciousness level. Relationship with friends showed positive relationship with all sub-factors of civic consciousness, and time spent on reading showed positive relationship with social participation consciousness level.

Lastly, among variables related to experience after college entrance, sense of belonging to college, college life adaption, the number of cultural subjects taken, variety of political engagement experiences, and volunteer experience appeared to have positive influence on general civic consciousness level. Especially, sense of belonging to college was positively related with all sub-factors, college adaption was positively related with tolerance consciousness, volunteer consciousness, and ethical consciousness, and the number of cultural subjects taken was positively related with tolerance and ethical consciousness. Variety of political engagement experiences positively influenced social participation consciousness, volunteer consciousness, and ethical consciousness. Additionally, volunteer experience positively influenced social participation consciousness, volunteer consciousness, and ethical consciousness.

Policy suggestions from the results of this study are as follow: We can summarize three comprehensive suggestions as follows before we continue with individual suggestions on 1) career maturity that is closely related to job acquisition - one of major tasks of early adulthood, 2) drop-out planning of college students which can be a possible cause of belated adulthood, and 3) college students' civic consciousness related to civil responsibility. First, students should be able to set proper study plan and career orientation considering their aptitude and talent by taking a career guidance in high school. Secondly, active support on club activities and self-governing activity should be provided so that students can experience positive group activities during their high school years. Thirdly, government should consider providing finance support program to assist universities' effort to tackle belated labor market entrance of university students by reducing their drop-out planning

and enhance citizens' consciousness, one of responsibilities to society.

We also recommend following policy suggestions based on analyses result of early adulthood career maturity's change and influence factor analyses. Firstly, it is needed to support to help youths in early adulthood have proper attitude toward future career and improved self-understanding. Secondly, gaps of career maturity and sub-factors by gender need to be analyzed in-depth and it is required that distinguished approach to improve this matter. Thirdly, a way to link career education program in middle school and in high school should be developed as middle school's effort such as free semester system for students' career consciousness development should not be ruptured in high school. Fourthly, career education for enhancing career competency should be provided by analyzing change patterns of students' career maturity in professional high school from entrance to graduation and influencing factors on the changes. Fifthly, we should classify early adulthood employees and job seekers' features, as well as high school graduates and college advanced students as separate groups among employees and job seekers, to compare and analyze each group's features and experience to enhance understanding to them and respective support policies for them are required.

Based on analyses result regarding college students' drop-out planning, firstly, university-level effort to assist students' adaption to school should be concentrated to lower grades including the early freshmen, so that they can feel the excitement and benefits of learning and why they go to college. Secondly, since sense of belonging to college usually develops while students continuously interact in college, it is required that colleges' spatial and financial support to self-organized students' group such as major and department gatherings or club activities to increase students' experience of being accepted by others and supported by colleagues. Thirdly, colleges should not regard college adaption as students' problem only, but consider as an essential factor to maintain students in school. Fourthly, colleges should facilitate psychological testing to figure out students with self-growth desire and develop programs based on their desire and provide information and opportunity to engage them into the program. Fifthly, colleges should keep enhancing their fundamental functions such as general lectures' quality, professors and lecturers, curriculum and lecture arrangement, teaching methodologies, and general educational environment improvement. Sixthly, from perspective of students' drop-out planning, professor should act as a mediator

to introduce students to professional institutes in school, rather than acting as subject to solve students' academic, occupational, and psychological problems. Lastly, colleges should consider students' aptitude and talent to applied major as an important factor in their early selection that evaluates school's students record.

Based on the analysis of college students' civic consciousness and its influencing factors, firstly, various parental education programs need to be provided to guide parents' desirable nurturing attitude and direction. Secondly, to support students' well-rounded development, elementary and middle schools should reinforce their accountability and operate nation's educational curriculum stable. Thirdly, it is necessary to activate various creative experiential activities to help students form friendly relationship with friends and enhance sociality. Fourthly, in middle school and high school ages, family and school should focus on students' reading education, and in colleges, cultural subjects should be open to enable students to take various classes. Fifthly, to assist students to adapt to university life and enhance sense of belonging to college, it is need to manage education provided by college of department, counseling program, and mentoring system. Sixthly, political activities and volunteer club activities in college need to be activated.

**Key words:** The Korean Education Longitudinal Study, career maturity, drop-out, civic consciousness, latent class