

## ABSTRACT

## Korean Educational Longitudinal Study 2005 (VII)

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This is the seventh annual report of Korean Education Longitudinal Study 2005(KELS:2005). KELS:2005 started in 2005 with 6,908 sixth grade student samples in 150 middle schools. Since then, it has traced the students yearly to investigate not only their learning and educational activities experienced in family, school, and social settings but also the cognitive and non-cognitive development. This report presents a summary of research materials, tools in the seventh year, and findings through the six years. Basic statistics on the educational experiences and growth were analyzed, and the effect of special-

purpose high school effect on Scholastic Aptitude Test was also investigated.

Chapter 2 presents the analyses for higher education using domestic and international sources of surveys and the surveys on the employed people and also individuals who were recently drafted into the military. The purpose of these analyses is to receive implication about survey model and contents necessary for the second stage of KELS 2005. These analyses used both domestic and international panel datasets. Domestic panel data were as follows: Korean Education & Employment Panel administered by Korea Research Institute for Vocational Education and Training, Graduates Occupational Mobility Survey and Youth Panel provided by Korea Employment Information Service. International panel data are The CIRP Freshman Survey(TFS), Your First College Year Survey(YFCY), and College Senior Survey(CSS) administered by Higher Education Research Institute(HERI), and National Survey of Student Engagement(NSSE) and Beginning College Survey of Student Engagement(BCSSE) developed by Indiana University in the United States. These panels were analyzed using Input-Environment-Output model developed by Astin(1970) and analyses by Dey et al(1997). This study also referred to Hankyoreh Newspaper, Joonang Daily, University News Network(UNN), and Journal for University Education to recognize important social issues and problems currently raised in the field of higher education in Korea.

Chapter 3 describes research design, model, survey period, survey subjects, survey methods and contents, and sample management for the second stage of KELS 2005. We structuralized the relationship among the first stage of surveys when the sample was enrolled in secondary schools, the second stage after the sample graduated from high school, and the third stage when the individuals in the sample became age 30. A sample was surveyed every year at age 19 and 20, and every two years after age 20 until age 26. Survey subjects were divided

into 9 categories such as individuals enrolled in higher education institutions, individuals in the middle of the college admission process, the employed, job seekers, and individuals who are drafted into the military. Commissioned institution was in charge of sample management. Main survey method was a face-to-face survey method in which each individual was interviewed using a paper-version of a questionnaire in addition to a supplementary web-based questionnaire. Various methods were used in order to increase response rates of survey participants. The 7th wave of the survey targets students with more specified contents in each area of questions.

Chapter 4 presents the response rate by each subject of questionnaire conducted in the first stage of KELS 2005, which is from the 1st wave to the 6th wave.

The response rate of the 7th wave of the survey is not available in this chapter because it is currently being administered. A forthcoming report will present the results by the time the survey is finished. In terms of the student questionnaire, among 6,908 respondents in the original sample, the response rates were 98.8% in the 1st wave, 95.5% in the 2nd wave, 95.1% in the 3rd wave, 91.1% in the 4th wave, 78.3% in the 5th wave, and 76.2% in the 6th wave, which indicated that the attrition rates increased in the 5th and 6th waves. The overall survey method was restructured from the 7th wave in which the survey subjects are the employed and college students. It is because it becomes difficult to conduct the survey through the channel of schools. The last part of this chapter describes how cross-sectional and longitudinal weights are calculated, and results with or without weights are compared. These weights are also used in the basic statistics and regression analyses.

Chapter 5 presents basic analyses of students' experience and growth using the first 6 waves of weighted data. Specifically, mean and frequency differences were presented by groups that were characterized as gender, father's

education, and types of high schools.

The results from basic analyses are summarized as follows.

[Students' educational experience at home and parents' academic support for their child]

Parents' academic support was dominant during years in the middle school except for the senior year in high school. However, parents' emotional support was stronger during high school years than middle school years. Overall participation rate in individual tutoring was most prevalent during middle school years. In the senior year of high school, on average, the most common academic subject for individual tutoring was Mathematics. Differences in households' monthly education expenditures were dramatic between groups categorized as father's education and types of high school.

[Students' educational experience within schools and school climate]

The degree of students' understanding of academic subjects reported by students decreased as grade levels increased. On average, students reported that they understood 41%~60% of lectures, which implies that students assessed their understanding at a fairly high level. The average degree of students' concentration level on lectures was about 30 minutes, and this result has remained similar throughout 6 waves of surveys. Students' assessment in terms of their teachers' emphasis on students' academic achievement was most dominant during the senior years in both middle school and high school when students experienced transition to high school and post secondary education, respectively. Among students in middle schools, students who were enrolled in general high schools in the 4th wave reported that their teachers' emphasis on their students' achievement was higher compared to the teachers'

emphasis toward students who were enrolled in other types of high schools. Among high school students, ones who were enrolled in special– purpose high schools reported that their teachers’ emphasis was stronger than teachers who taught in other types of high schools.

On average, students’ assessment of their teachers’ passion and knowledge was 3 out of 5, which was relatively high. However, it slowly decreased as students moved to the next grade level. This assessment on teachers’ passion and knowledge differed by types of high school students attended. For example, students enrolled in special–purpose high schools and independent high schools rated their teachers’ passion and knowledge at a high level throughout their high school years whereas students who attended vocational high schools rated their teachers at a low level. Students enrolled in other types of high schools placed their teacher at a similar rank that students in general high school did.

[Student activities and time management]

Self–regulated study time decreased during middle school years whereas it increased during high school years with the most dramatic increase in the 12th grade. On average, students spent three hours per day for their private tutoring, but it dramatically decreased in the 12th grade. There was a dramatic difference in students’ time management for their study depending on academic subjects, parental education levels, and school types.

[Students’ aspiration and plans]

Students’ educational aspiration was high; in all 6 waves of surveys, about 60% of respondents reported that they plan to receive college education. In addition, as students’ grade levels increase, the proportion of students who reported that they intend to pursue education in graduate schools rose.

Family was the most influential factor in deciding college enrollment. Especially, this family factor played a more important role for students whose fathers have high levels of education. People employed in private tutoring institutions were the least influential factor in the decision of college enrollment. Students valued schools' reputation and name the most when they decide which colleges to apply for followed by employers' college preference. Students' interest, aptitude, and labor market preferences played important roles when students decide their majors in colleges. Most students, on average, target the "scheduled" college admissions. However, students enrolled in vocational high schools or other types of high schools focused more on nonscheduled admissions compared to their peers in general high schools. Thus, types of admission that students preferred were different by types of high schools. In addition, students reported that they acquired most of the information about college admissions through their high schools.

For students who plan to enter the labor market right after they graduate from high schools, the most important reason for doing so is to earn income. Students report that they decide whether they will work after high school during their senior year of high school. The most common method of receiving career-related information was through the internet, and 43% of these students who plan to work reported that they did not have a plan to receive higher education in the future.

[Students' consciousness on their lifetime goals]

Students possessed above-average levels of consciousness on most categories of lifetime goals such as physical health, wealth, honor, social contribution, human relationships, family happiness, self-growth and leisure except for religion. Students placed the most importance on human relationships(3.74 out

of 5) followed by self-growth(3,67) whereas respondents placed the least importance on religion and social contribution at 2.68 and 3.20, respectively. Results suggested that students pursue a meaningful life at the individual level and were expected to contribute to the development of future society.

Male students placed more importance on their physical health than female students whereas female students had more consciousness on social contribution compared to male students. Students whose fathers had higher levels of education showed greater levels of consciousness on their lifetime goals. In addition, the level of consciousness on these goals differed by school types. For instance, students enrolled in special-purpose and independent high schools reported higher values on physical health, honor, social contribution, human relationships, family happiness, and self-growth whereas students in technical high schools placed the least values on these lifetime goals.

Chapter 6 describes analyses that observe the effect of special-purpose high schools on the results of CSAT in order to test the possibility for the further use of KELS 2005. The purpose of these analyses is to observe whether there is a greater increase in test scores in CSAT for students in special-purpose high schools compared to students in general high schools. If a positive school effect is detected, this report tries to answer what factors in special-purpose high schools contribute to this positive impact on students' academic achievement. These analyses are conducted using the data during 6 years of secondary schools in KELS 2005 and try to observe influences of various factors related to students and their high schools. This study also uses a number of variables that indicate students' background characteristics that are collected during three years of high schools. When we restrict the sample to students' enrolled in general, foreign language, international, and science high schools, the sample size that includes complete data is only reduced to 2,545~2,620. Using this

complete sample, this study uses Ordinary Least Square(OLS) and quantile regression in the analyses. Results suggested that there is a positive effect of going to special-purpose high schools on students' academic achievement. Even though this positive result seems to be explained by selection bias, there were stark differences in the educational environment between general and special-purpose high schools. Especially, based on the results from quantile regression analysis, there was a greater impact in scores of English test in CSAT among students in the highest quantile of achievement compared to their peers in the high and middle quantile. However, using total scores of CSAT, the effect of special-purpose high schools decreased. These results imply that foreign language high schools increased students' achievement in English and high achieving students performed well overall regardless of the type of high schools they attend. Since this study faces many unobserved students' characteristics that this study fails to control for, the true effect of special-purpose high schools is questionable.

Lastly, based on the results derived from basic analyses and the analysis to detect the effect of special-purpose high schools, Chapter 7 presents policy implications and proposals for establishing infrastructure for longitudinal data collection and its use. Policy implications based on the results of this study are as follows. First, it is necessary to have more consideration on differences in educational support resulting from household backgrounds. Second, schools need to be transformed into a place that supports and guarantees students' learning. Third, it is crucial to support students to have enough time for their self-regulated learning. Fourth, programs to support students' career paths and school enrollment need to be developed in order to help students design their career paths when they are in secondary schools. Fifth, it is important to assess growth in consciousness of students' lifetime goals. Sixth, successful

establishment of an admission process for self-regulated learning and the admission officer system is crucial. Seventh, special-purpose high schools should be differentiated from high-achieving general high schools.

There are several considerations required for further analyses using various longitudinal datasets in order to enhance educational policies and schooling.

First, a special law should be enacted for allowing links between datasets to motivate further research. Second, a system of providing longitudinal data needs to be enhanced and stabilized. Third, it is crucial to establish a national committee for educational statistics that conducts standardization of data and develops standards for statistical and builds national data warehouse. Fourth, additional support for the second stage of KELS 2005 is needed to administer successful surveys for students after secondary education. Fifth, KELS 2005 dataset needs to be analyzed further for various purposes. Sixth, in the second stage of KELS 2005, survey items related to educational policies should be designed and analyzed.

**Keywords : KELS 2005, longitudinal study, cognitive growth, noncognitive growth, effect of special-purpose high school, crosssectional weight, longitudinal weight**