

## Abstract

# Strategic Planning for the Advancement of the Teaching–Learning Quality in Higher Education(IV)

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This research aims to devise strategies to improve the quality and competitiveness of college education in Korea. Based on the systematic analyses of data on students' and professors' experiences of teaching–learning, this study examines the characteristics of teaching–learning practices in two-year junior colleges and four-year universities. The research differentiates its approach from the previous studies of similar topics in two ways. First, this research centers on the perceptions and activities of the professors as well as the students' learning experiences. Second, despite their importance in higher education system, the teaching–learning practices of junior colleges are located in the periphery of both academic and policy interests. This study lends a meaningful contribution in constructing a type-specific higher education teaching–learning capacity assessment system by investigating the teaching–learning practices of the junior colleges.

Designed as a five-year research project, each part of the study expands its contents and scope by year. Starting with the data collection and analysis of students at four-year universities, the study adds four-year university professors, two-year junior college students, junior college professors, and graduate students on the investigations consecutively. The fourth year research carried out in 2016 conducted the main survey

on students and professors at four-year universities, and started the main survey for the first time on students at junior college. A survey instrument for junior college professors was developed and a pilot survey was conducted in 2016 as well. The number of participants in 2016 survey adds up to 42,230 undergraduate students and 2,465 professors from 65 universities, and some 13,000 students from junior colleges. A summary of research findings and suggested policy issues are as follows.

Definition of teaching–learning process and Literature review on College Impact Studies

Chapter II reviews the empirical studies on college impact to discuss the concept of teaching-learning process and derive the implications on designing the teaching-learning process analysis. Both domestic and international literature was reviewed. The central theme of this research, teaching-learning process, is grounded on the college impact studies, the researches focusing on verifying the factors in the ‘process’ of education, which affects learning outcomes. In a more narrow sense, teaching-learning process means student engagement in learning, a concept which masters of college impact studies have developed.

Chapter II presents the concept of teaching-learning process within the context of ‘college impact’ studies, a context in which the researchers propose the teaching-learning process as the key concept in this research. This chapter also reviews the previous studies utilizing the data from students and professors at four-year universities, and students at junior college focusing on ‘college impact.’

Analysis on teaching–learning process of students at four–year universities

■ Analysis on the current state of teaching-learning process

Analyzing the frequency and intergroup difference, researchers examined the current state of teaching-learning process of 2016 four-year college students, and followed the

six-year transition of teaching-learning process from the 2011–2016 NASEL data. Major findings are as follows.

First, satisfaction in student services provided by colleges shows a steady growth since 2013, suggesting that higher education institutions are endeavoring to improve their education environment. Yet, the state that almost half of the respondents indicating not using student services has not improved over the last few years. Second, the student satisfaction in general education courses has improved. Previous studies observed the student evaluation on general education courses being negative, whereas this year's data showed positive responses on student satisfaction in general education courses. Third, the weak points in teaching-learning process pointed out in previous years have not been improved. The frequency of student-professor interactions, immersion in studying activities, student engagement in learning in classes operated in English, and the frequency of learning experiences supporting global skills all remained in a low level. Fourth, students have not responded positively about the improvement of teaching-learning outcomes. Even for the questions on knowledge and skills in majoring field and problem solving abilities, which showed a relatively high level of improvement, positive responses were given only by the half of the respondents. In case of the question on the critical, analytical thinking skills, which is one of the major indicators of learning outcomes, only less than 40% of respondents agreed to the statement that their college education improved or highly improved their thinking skills.

□ Analysis on the teaching-learning process and the factors affecting learning outcomes

The 2016 analysis on the teaching-learning process and the factors affecting its outcomes focused on the examinations of the within- and between- college effects. This research, put in another way, investigated for the existence of intercollege differences in the effects of teaching-learning process, and the factors positively affecting the gap between various colleges. Major findings are as follows.

First, the data presented that individual background characteristics have a stronger influence than college features on teaching-learning impact indicators such as

attainment of knowledge and skills in majoring fields of studies, critical and analytical thinking, and problem solving skills. The variance of teaching-learning impact indicators that can be explained by differences in college features remained very low, at around 1-2% of the indicative factors. Second, an outcome worth attention in the analysis of intercollege differences is that the professors' satisfaction in their profession has a positive influence on teaching-learning outcomes such as enhancement of critical-analytical thinking skills of students. The result suggests that a professor-related factor has a significant meaning in improving the teaching-learning process, thus implying that the competence development and working conditions for professors should be considered important in policies aiming for the quality of higher education. Third, in relation to within college effect analysis, the significance of the active-collaborative learning experiences was confirmed. Experiences of high-order thinking skills, collaborative learning, active-collaborative learning consisted of study-group activities in classes were verified as having positive impacts on teaching-learning outcomes. In addition, active participation in class, collaborative learning, global learning experience, and experience of diversity are found to have positive effects on teaching learning outcomes as well as some core teaching-learning factors such as student-professor interactions.

Analysis on teaching–learning process of professors at four–year universities

▣ The perception gap between professors and students on teaching–learning process

Analyses of the student-professor perception gap on the current state of teaching and research activities of four-year college professors and on the teaching-learning process revealed the following findings.

First, professors responded most positively on the item 'support from the university on improving teaching method' among the indicators for the support on research and teaching. The incentives for teaching outcomes, however, were found to be insufficient. Universities pay a great attention to quality of their education and thus provide much

support for quality teaching activities, whereas not much reward exists for the teaching outcomes. Second, the analysis on perception gap between students and professors reveals that the gap persists on their perceptions on course organization and management. Professors reported that major and general education course teaching-learning organization was balanced, despite student experience was found lower in all itemized questions. Students and professors also had a significant difference in their perceptions on student-professor interactions. Third, in case of student support programs, professors considered ‘support in social advancement after graduation’ and ‘internship experience’ most important, whereas students’ experiences on these support from school were found to be very low. Instead, data showed that students experienced higher rate of ‘support on time investment in academics’.

#### ■ Factors affecting job satisfaction of professors

Among many factors, job satisfaction of professors was found to have a strong correlation with teaching-learning process, as well as its variance in relation to inter-college differences. Thus the researchers examined the individual as well as the institutional factors affecting job satisfaction of professors, which led to the following conclusions.

First, among the job satisfaction variance professors reported, the variance explained by institutional differences was 7%. Professors’ job satisfaction is significantly influenced by the features of the colleges they work at. Second, job satisfaction of professors was found to be higher among the professors with higher standing in their college system, professors in social science, medical, arts and sports than humanities. Professors in tenure track with guarantee in their retirement age than those in non-tenure track, and professors with only teaching responsibilities than with both research and teaching responsibilities reported higher job satisfaction. Job satisfaction was found higher among the professors who responded that their colleges have good support system for research and teaching. Professors with better impressions on their students and on their department being active in endeavors of improving curriculum presented higher job satisfaction. The institutional characteristics that affect job

satisfaction of professors were found to be their location in metropolitan Seoul area, then their establishment type being national and corporate universities.

Analysis on teaching-learning process of students at junior colleges

▣ Analysis on the current state of teaching-learning process

The first main survey on teaching-learning process of junior college student in 2016 yielded the following results. Except for some factors, student responses were negative regarding the improvement in teaching-learning outcomes in higher education. Factors with relatively higher rate of positive responses, such as problem solving skills, acquiring knowledge and skills in majoring fields, and self-management skills, remained at neutral in their averages. Analytic and critical thinking skills, communication skills, and refinements in liberal arts were lower, showing that junior college students perceived these skills and knowledge have not developed much through their college education.

▣ Analysis on the teaching-learning process and the factors affecting the outcomes

The analysis was conducted to examine both within- and between-college effects as in case of the examinations on the data from the four-year college students. Major findings are as follows.

First, teaching-learning process and its outcomes did not present much gap between institutions for junior college students. More than 95% of the variance in teaching-learning outcomes experienced by junior college students are accounted for by the individual background or experiences of teaching-learning process, but not much by the institutional difference. Second, variables of institutional features explaining the intercollege differences in teaching-learning process and its outcomes were limited, nevertheless some college factors were found to have partial effects on intercollege gap. Statistically significant college factors are very much limited to a small number of variables including the location of the college, engagement in college life

indicated by average GPA, and institutional average in student-professor interaction. Some key indicators of educational conditions employed by University Information Disclosure, such as the amount of scholarship per student, were not verified.

Major findings from the analysis on the within-college effects are as follows. First, desirable factors of teaching-learning process to four-year college students were also meaningful educational experience to junior college students. Satisfaction in teaching-learning in majors, student-professor interactions, higher order thinking, study-group activities, and active participation in class were verified as having positive correlation with teaching-learning outcomes, after controlling for the effects of individual background variables. Second, professor's field expertise, which is a specialized advantage of junior colleges, was found to be a core factor affecting the teaching-learning outcomes. The field expertise of the professor not only did affect the various outcomes of teaching-learning process as much as students' college engagement and interactions with the professor, but also had stronger influence than other independent variables. This research outcome is closely aligned with the current policy of the junior colleges aiming to provide practical and suitable training for industrial demand, and implying the direction of future development of junior colleges. Third, the data verified that especially for junior college students, the professor-related factors were important factors affecting teaching-learning process and its outcomes. Effective factors consistently observed in teaching-learning process and its outcomes for junior college students were satisfaction in teaching-learning in major courses, field-based instruction, student-professor interaction, which are all factors related to the professor. Although learning earns more attention in discussions of educational outcomes, this research shows that the importance of professor and his/her influences on student as an active agent in the process of education cannot be disregarded. Fourth, teaching-learning process and its outcomes differ by individual background, and thus the information should be utilized for the student administration and support system. Analysis on group differences revealed that parents' education level was a significant variable explaining the gaps in active-collaborative learning, student-professor interactions, teaching-learning outcomes, peer interactions, diversity experiences. College authorities should pay attention to the findings that the longer the students

stayed in school, the more negative responses came on questionnaires indicating their engagement level in college life, satisfaction in courses, and evaluations on various student services. In addition, students with highest high school GPAs were less engaged in college, and assessed the quality of student services and the professors' field-based instructions lower than other students although they are more engaged in active-collaborative learning activities. And they have more frequent interactions with the professors than general student body. It implies that the college authorities have more room to meet the student expectations. There was also a considerable difference in the teaching-learning process and its outcomes by majors. This should also be considered when examining teaching and learning support systems in each major.

Analysis on teaching–learning process of junior college professors

This section examines the validity of the survey tool with a preliminary survey, in order to analyze the perceptions on and practices of teaching-learning activities of junior college professors. The main results obtained from the preliminary survey are as follows.

First, the level of junior college professors' participation in research was very low. Total of 110 professors from four junior colleges participated in the survey. Researchers learned in the process of recommending colleges to participate in the survey that the understandings on the significance and utilization of the teaching-learning process analysis data in junior colleges were meagre at best. Second, the results of the preliminary survey on the validity of the teaching-learning process survey tool for the junior college professors were generally positive. Nevertheless, some issues were identified that require more attention in next year's survey. There was no noticeable problem in the process of verifying the content validity by reviewing the survey questionnaire from junior college professors. There was no problem in terms of feasibility in the response tendency of 110 junior college professor participants. Yet in terms of the internal consistency between the measured items by factor in factor analysis, some inconsistency was observed in comparison with the results from the

four-year college professors, thus a follow-up study should be needed. Considering the limitations in the scale of this preliminary survey, it is strongly recommended to reinforce the validity of the measurement tools by a bigger number of samples and replication studies on teaching-learning process questionnaires for junior college professors.

Analysis of the higher education teaching–learning process data and its utilization

Considering that collection and utilization of data is not universal in Korean higher education institutions, KEDI has been encouraging the participant institutions to independently analyze and utilize NASEL data by presenting how to manage the teaching-learning process survey data at the university level since 2013.

Chapter VII provides various alternative models for analyzing and utilizing the teaching-learning process data, by compiling the examples of analysis of NASEL data over the last three years. This year's research proposes five alternative models by analyzing the NASEL in connection with other relevant data already held by the university. Among the five alternative models, Model 4 and Model 5 are presented using concrete examples. Researchers selected D university, which is a large-scale private university participating in the KEDI-NASEL survey since 2012, as a case study institution. Two cases of the university's utilization of NASEL tools were presented: satisfaction with the operation of general education curriculum, and analysis of overall satisfaction with education. Then the ways to utilize NASEL research tools at individual universities were explored.

Policy suggestions for the quality of teaching–learning process in higher education

Chapter VIII proposes policy suggestions for improving the quality of teaching-learning process in higher education institutions. The proposals are presented in two fields: one for improving the current state of the teaching-learning practices,

and the other for analyzing the teaching-learning capacity of the institutions and constructing a feedback system.

**key words:** teaching-learning process, learning outcomes, college impact, student engagement, institutional capacity of teaching and learning, university professor, students at junior college