

## ABSTRACT

## Strategic Planning for the Advancement of the Teaching-Learning Quality in Higher Education(VII)

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### **Executive Summary**

This report presents the annual update of the 'University Teaching-Learning Research' project based on the 10-year plan (first round in 2013-2017 and second round in 2018-2022). This update marks the seventh year of the whole cycle. In this year's study, the survey instrument is revised to incorporate the latest demand for surveys on teaching and learning, student and faculty surveys are conducted at 2-year technical colleges and 4-year universities using the revised survey instrument, and various analyses are conducted to provide policy

implications. Main findings from this study are summarized below:

### **Literature Review and Revision of Survey Instrument**

Chapter 2 reviews the literature regarding the suggestions made in the first half of the year to revise the survey instrument and introduces the revised items. Recent studies on college teaching and learning are reviewed to draw implications for revising the survey. The overall structure of the student survey is changed to a module system, and the items in the faculty survey are revised accordingly. For students, separate surveys for 2-year and 4-year institutions are combined into a single survey. As 2019 National Assessment of Student Engagement in Learning (NASEL) is divided into 'mandatory' and 'optional' surveys, (1) items to be included in the mandatory common survey are selected and restructured; and (2) the optional modular survey is created. The optional modular survey consists of three components on 'freshmen survey,' 'class satisfaction,' and 'skills & challenge spirit.' For the faculty survey, items relevant to the updated student common survey are refined. Following updates of this research project need to develop and revise the survey items on faculty effectiveness.

### **Collection and Management of Data on College Teaching and Learning**

Chapter 3 presents the updates on the data collection and tests the reliability and validity of the data. Since this year's study focuses on promoting the use of the survey in the field, efforts are made to closely collaborate with the colleges and universities.

Survey responses were collected over a month (from May 27th to July 8th), around the end of the semester. Among 4-year universities, 41,225 students from 76 institutions (39.4%) and 2,619 faculty members from 69 institutions (35.8%) responded. The average response rates are 6.01% and 6.13% respectively. Among 2-year colleges, 12,522 students from 29 institutions (21.2%) and 657 faculty

members from 30 institutions (21.9%) responded. The average response rates are 9.60% and 10.64% respectively. Overall, the data is reliable. The 2019 student survey is divided into common and optional (freshmen survey, class satisfaction, skills & challenge spirit) components. The common survey was provided to every student in the sample. The optional survey was provided only to the students enrolled in the opt-in institutions. Among 4-year universities, 48 institutions chose the freshmen survey; 59 institutions chose the class satisfaction survey; and 65 institutions chose the skills & challenge spirit survey. Among 2-year colleges, 16, 19, and 19 institutions did so respectively. The data collected by these three revised instruments turns out to be sufficiently reliable, showing Cronbach's alpha over 0.7.

### **College Teaching and Learning**

Chapter 4 presents the results from the analysis of the recent three years' data on the six survey components to evaluate teaching-learning effectiveness (**proactive collaborative learning, faculty-student interaction, quality of student support, satisfaction in the quality of major and liberal arts classes, teaching and learning outcome**). Consistent from last year's study, the analysis focuses on the variations across institutions and student groups and the gap in perceptions between students and faculty, separating 4-year universities from 2-year technical colleges. Characteristics such as location, control (i.e., private and public), and size are examined to analyze the institution-level variation while characteristics such as gender, grade level, and field of study/program are examined to analyze the student-level variation. Along with the aforementioned six components, faculty's perceptions and educational activities are also analyzed.

Students enrolled in 4-year universities are more satisfied with the qualities of classes in their major fields of study, student support, and general liberal arts classes while least satisfied with the faculty-student interaction. They show a moderate level of satisfaction in active collaboration and skill development.

These results imply that although students are pleased with the classes and student services that institutions offer, they have less-than-ideal experiences with active collaboration that positively influences teaching and learning outcomes. More importantly, students' dissatisfaction with faculty-student interaction calls for efforts to promote interaction between students and faculty.

Students enrolled in 2-year technical colleges are more satisfied with the qualities of classes in their major fields of study, student support, and general liberal arts classes whereas less satisfied with active collaboration and teaching and learning outcomes. Despite appreciating the classes and student services offered at their institutions, these students do not think they have developed their skills significantly. They also have less-than-ideal experiences with active collaboration, which is key to skill development. Similar to students in 4-year universities, students in 2-year colleges are least satisfied with faculty-student interaction. Medium- and small-sized institutions and institutions outside Seoul provide a greater level of faculty-student interaction, compared to large institutions and institutions located inside Seoul. Females, freshmen, and students in the fields of education and arts & sports interact with faculty less frequently, compared to males, continuing students, and students in other fields of study. These results call for strategic support for females, students in lower grades, and students enrolled in certain fields of study.

In both 4-year universities and 2-year technical colleges, the gap in perception of teaching and learning between students and faculty has not closed. The level of student satisfaction is lower than the level of efforts reported by faculty themselves. In terms of active collaborative learning, faculty members report a higher level of critical thinking activities during class than students do whereas students report a higher level of collaborative learning than faculty does. The gap between faculty and students varies by the control, size, and location of the institutions. Specific strategies can be developed when universities and colleges acknowledge this gap and identify the causes.

## **Strategies to Improve University Teaching and Learning**

Chapter 5 presents the results from the analysis on the key research topics, using the longitudinal data from last year's study and the updated data from this year's study. The key topics include 1) **the effectiveness of the programs designed to improve faculty-student interaction**, 2) **the impact of faculty-student interaction on learning outcomes**, 3) **patterns of student learning engagement (focusing on low-performing students)**, 4) **the causes of dropout**. The former two topics are relevant to the case study of the two institutions that analyzed data matched with student information. For the latter two topics, national-level data is analyzed to investigate the pressing issue for Korean higher education - student recruitment and retention. All of these four topics focus on identifying the practices that institutions in the field can implement to improve the quality of teaching and learning.

It is the concept of 'faculty-student interaction' that underlies both cases of institutions. Although 'faculty-student interaction' is considered a mediator in the analytic framework of teaching and learning, it can also be deemed as both an independent and a dependent variable depending on the purpose and focus of analysis. **The case of A institution focuses on how the learning experiences in specific programs influence students' faculty-student interaction in the future.** In other words, 'faculty-student interaction' is included as a dependent variable - as an outcome of certain teaching and learning experiences. **On the other hand, the case of B institution investigates how students' proactive learning engagement and faculty-student interaction influence their learning outcomes (e.g., GPA, satisfaction, institutional-level skill measures).** Here, 'faculty-student interaction' is considered as an independent or mediating variable. According to the findings from A institution's case, freshmen who participated in the 'faculty-student interaction improvement program' that was first introduced in 2018 report higher level of sense of belonging, satisfaction, and student-faculty interaction, compared to non-participants. Although program participation does not have a

direct effect on students' sense of belonging and satisfaction while holding other covariates associated with affective achievement constant, it has an indirect effect on the outcomes via 'interactions related to career.' According to the findings from B institution's case, students who engaged more frequently in 'proactive learning' turn out to be more satisfied with their experiences and report higher achievement on B institution's key skill indices. The more frequently students interact with faculty, the higher level of satisfaction, immersion, and skill development they report.

The findings from these cases of two institutions imply that the NASEL is more useful when combined with institutional data. The findings also point to the new aspects of outcome management for colleges and universities. Additionally, investigating cases of specific institutions will help refine the analytic framework and the connections between relevant covariates.

Based on the results from the analysis on the '**patterns of student learning engagement (focusing on low-performing students)**,' students in both 4-year universities and 2-year technical colleges can be divided into three categories of 'minimum learning engagement,' 'interactive learning engagement,' and 'high learning engagement.' Student characteristics including gender, high school grades, first-generation status, semester, admission type (early admission/regular admission), relative preference for institutions and programs, and fields of study significantly influence this categorization. Significant institutional characteristics include type of control (only for 4-year universities), location, size, and the proportion of full-time faculty. 16.5% of students in 4-year universities and 20.1% of students in 2-year technical colleges are categorized into the 'minimum learning engagement' group. In order to improve these students' learning engagement and help them adapt to college life more easily, prevention strategies (e.g., student learning capacity support programs, first-year support programs) must be designed. More importantly, it is necessary to target and focus on specific student populations considering student-level characteristics correlated

with the categorization. For example, special attention is needed for females, students who have lower high school grades and whose parents have attended colleges, students admitted through early admission, students in lower grade levels, students who initially did not have high preference for their current institutions and programs, and students in education, medicine, and 'other' fields of studies.

**The results from the analysis on the 'causes of dropout' are as follow.** Specifying dropout into stop-out and dropout (voluntary withdrawal), 31.4% and 5.5% of the respondents had plans for stop-out and withdrawal respectively. Such student characteristics as gender, grade level, major field of study, relative preference for institution and program, and parents' educational attainment turn out to **significantly influence students' stop-out plans**. In other words, males, students admitted through early admission, students in lower grades, students in humanities and social sciences, students who initially did not have high preference for their current institutions and programs, and students whose parents graduated high school only are more likely to have plans for stop-out. In terms of college experiences, students who have lower level of class satisfaction, immersion, class preparation and activities, critical thinking in class, challenge spirit, interaction with faculty (coursework), interaction with faculty (outside coursework), and interaction with other members on campus are more likely to have plans for stop-outs. On the other hand, student characteristics such as gender, high school grades, admission type, grade level, major field of study, relative preference for institution and program, parent educational attainment turn out to be significantly different for the **students who have plans for withdrawal**. Similar to stop-out plans, covariates related to college experiences all record low average values. Students admitted through early admission, students in lower grades, students in humanities and social science, and those whose parents hold degrees higher than Master's are more likely to stop out. **Fields of study is one of the key factors that influence stop-out and dropout**

**decisions.** Despite within-field variations, students in humanities, social sciences, and arts & sports are more likely to stop out and dropout. This is not surprising given that only a limited number of majors enjoy smooth transition into the labor market. These findings imply that students' preference for fields of studies and majoring programs is largely affected by their employment prospects, and therefore, calls for more flexible categorization of majoring fields and curriculum management.

### **Discussion and Policy Implications**

Chapter 6 discusses how to utilize the survey instrument and data. First, recent trend in institutions' demand for survey and outcome management system is reviewed using the results from the Delphi survey conducted on experts. This investigation guides identifying the strategies to promote the utilization of the survey instrument and data. Although practitioners in the field welcome the change to a modular system and the revision on the student survey items, they also feel greater pressure about increased workload of managing extra surveys. It is one of the key issues in the second round of this project to keep revising the instrument according to the latest demand while remain remaining consistent from last year's survey.

Policies need to be implemented to encourage institutions to utilize the survey data in various ways. For example, IR centers that manage data on college teaching and learning outcomes will promote relevant data analysis. The demand for utilizing survey data will increase, following the development of programs to support teaching and learning and proved effectiveness of policies. Additionally, a cooperative investigation governance among universities and colleges, government, and survey institutions is needed keep pace with the recent development of institutional-level accountability and outcome management system. Developing a cooperative relationship will strengthen the research on university teaching and learning.

Second, the reliability of the ‘analytic framework for college teaching and learning,’ developed in the sixth update of the project (Im et al., 2018), is tested using the data collected this year. The cases of two institutions provide specific examples of how universities and colleges can utilize the survey instrument and data. Using empirical data, this study shows that the analytic framework presented in last year’s update has a decent level of goodness of fit, both for 4-year universities and 2-year technical colleges. This implies that the theoretical framework on teaching and learning process can be generalized regardless of specific institutional characteristics. To further improve the reliability and adaptability of the framework, efforts are needed to increase the alignment between data and the conceptual model by closely communicating with institutions in the field. In other words, a survey/research system that reinforces a virtuous circle of ‘development of theory - verification - revision and improvement - development of revised theory’ should be in place.

Third, strategies to revise the survey are drawn from the case studies of institutions that participated in the 2017-2019 NASEL in order to promote the usefulness of the survey instrument. Variations within an institution, as well as among institutions, by different fields of study and admission types are examined. By analyzing the variation in satisfaction for faculty feedback and classes in major fields of study, (1) a large disparity in teaching methods is found among **faculty members in different fields of study**. (2) **Analyzing longitudinal data of the last three years** helps clarify the key issues in improvising the quality of college teaching and learning. The institutions in the case study show a unique pattern of three-year trend where desire to dropout and the level of class satisfaction are reversed. (3) **The comparison between the results from the student survey and faculty survey** sheds light on the gap in perceptions between students and faculty. In terms of ‘faculty-student interaction,’ for example, the level of interactions that students report they experience is far below what reported by faculty members. Lastly, **several indices that are meaningful and convenient for**

**interpretation** (e.g., teaching-learning improvement index, class participation index, etc.) are investigated in order to support evidence-based decision making at universities and colleges. If the following annual updates of NASEL provide results from such institutional-level analyses, institutions will get equipped with a powerful policy tool to facilitate their own accountability and outcome management system.

**Key words:** college teaching and learning, learning engagement, higher education quality assurance, student survey, faculty survey