Abstract

A Study on the Condition of Graduate Education Operation and Improvement Strategy

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The purpose of this study is to provide higher education constituents with the future direction of Korean graduate education and specific policy suggestions for the improvement of it based on thorough analyses of educational condition, education process, and research practice. Follows are the research questions raised to achieve the goal:

1) What are the characteristics of the changes in graduate education policy and system and what further policy implications can we get from them?

2) What are the characteristics of innovative changes in graduate education and research for other countries and what policy implications do they suggest?

3) What are the overall educational condition, education, and research and how it differs by academic disciplines and groups?

4) What factors are associated with students' satisfaction with graduate education and research outcomes?

5) What are the policy implications for the improvement of graduate education and future directions?

Followings are the results of the research analyses and policy suggestions based on them.

Considering the outcomes and limitations of changes in the policy and system of graduate education, this study suggests relevant policy changes: First, it is required to implement extensive and systematic policies with the goal of promoting the quality of graduate education. Second, financial aids to ease the burden of graduate students and facilitate research based education need to be expanded in addition to program based massive financial supports. Third, it is required to develop a performance management system of graduate schools.

From the comparative analysis of innovative graduate education programs in foreign counties(United States, Japan, China, and Germany), the policy implications emerged were: First, given all four countries focus on supporting new scholars, it seems reasonable to channel financial aids to beginning scholars. Second, it is required to establish a systematic way of financial support for graduate students so that they could concentrate on their study with a stable economic basis. Third, the policy efforts of forming leading institutions through selective supports for a limited number of colleges indicate that intensive supports for selective graduate schools would enable rapid growth of research capability and visible outcomes. Forth, the integration and collaboration between education and research and multidisciplinary approach would serve the rationale for the support of interdisciplinary collaboration among graduate education programs. Fifth, graduate schools need to actively support their graduates to place jobs given other countries' focus on supporting the advancement to professional society by human resources with graduate degree.

The prerequisite of effective understanding of graduate education and research is to categorize them in an appropriate way. To achieve the goal, this study identifies, first, the variables that represents the characteristics of graduate schools and performed a Hierarchical Cluster Analysis (HCA). The result of HCA categorizes graduate schools into research intensive, flagship national university, research intensive private, and education focused private.

As the next step, this study constructed a framework to analyze the educational condition and the status of graduate programs on operation, students, faculty, and educational costs. Outstanding characteristics of our graduate schools are 1) graduate

education of South Korea has seen a dramatic growth in quantity since the nineties with which the quality is not in concert, 2) there are few research intensive universities even with the goal of being one, 3) the main limit of our graduate education is originated from the lack of faculty, 4) most of our graduate schools rely on government for their research grant, and 5) graduate students are not allowed to focus on their studies with the low rate of scholarship receipt compared to the United States.

In addition, this study further suggests a framework to map out the subjects of education and research, relevant organization, and operational process with the goal of understanding the practice of education and research. As the research methods, the analysis of regulations, statistics from Alimi, survey instruments for student and faculty, descriptive statistical analysis, and focus group interviews were applied.

The results of survey analysis and focus group interviews could be categorized into three pieces; the quality of graduate education, organizational structure and governance, and education and research practice. First, the overall quality of our graduate education is found to be fragile given the fact that it is decided by human resources within graduate school, superior condition and administrative infrastructure for research and education, graduate education system, and reputation for graduate schools. Second, in terms of organization and governance of graduate schools, academic administration of graduate school is governed by central office rather than by each individual department, most of programs do not have faculty in charge of graduate education only, the autonomy of faculty in deciding program restructuring including starting a new program, recapping student enrollment headcount, assigning budget are significantly limited, whereas the academic freedom is fully secured in research activities.

Third, speaking of education and research of graduate programs, each graduate program focuses on work shop related to majors, seminar, and speech by main figures in the discipline as its extra curricula activities. Other characteristics include the difficulty in taking courses offered by other programs, improvement in the efforts of reflecting students' and private sectors' needs on the curriculum, increased concern for learner oriented perspective in an effort to signify research topics of them via education, active involvement in research projects supported by governmental resources, strong emphasis on

stable condition for education and research by expanding grant size, and overall satisfaction with curriculum.

As the next step, this study analyzes survey data from student and faculty to examine the factors affecting the outcomes of education and research. Recognizing the nested nature of students with a same college, student related variables(Level-1) were regressed on dependent variables followed by institutional level variables(Level-2). Hierarchical Linear Model(HLM) is applied for the analysis of institutional level predictors. For this, the total variance explained by the school identity was first examined to decide the practical benefit of applying HLM.

First of all, among the predictors at level-1, the satisfaction level of female students is lower than male, student older than 40 showed higher satisfaction, and students who earned undergraduate degree from other institutions reported higher satisfaction with curriculum. The higher the portion of scholarship in paying for graduate education, the higher the satisfaction level, and students who well prepare classes reported higher satisfaction. In terms of academic discipline, all other disciplines excluding arts show higher satisfaction rate compared to liberal arts/social science. One of the interesting findings of the study is that the academic competency of colleague students and programs and the quality of education are the decisive factors deciding the level of students' satisfaction.

Next, it is disclosed that there is no difference in research outcomes by the gender. However, students who started their graduate study at a later stage show lower research outcomes, whereas the motive for and goal of graduate study are not a significant predictor of research outcomes. Students who completed undergraduate degree from another institution are found to produce lower research products compared to their counterparts who graduated from the same institution. Students actively involved in research projects funded by government are found to produce higher research outcomes while the portion of scholarship in the total costs is found not to be associated with research outcomes.

The competence of colleague students and graduate program, and job placement rate do not meet the minimum level of statistical significance. Rather, the research outcomes are

differentiated by the academic discipline; technology, medical, and science fields show higher rate of outcomes compared to liberal arts and social science counterparts. Used as also a dependent variable in the study, the level of satisfaction is found to be positively associated with research outcomes with large standardized coefficient.

Drawing on the results of the analysis of innovative case studies, educational condition, the practice of education and research, factors associated with outcomes of graduate education, this study provides policy suggestions for the improvement of graduate education at both governmental and institutional levels: The desirable future direction is represented by establishing world class research competency, educating next generation scholars leading societal development, re-configuring the identity of graduate education enabling synergy effects between education and research, construction of excellence oriented academic community, and shifting of leadership for graduate education policy. Governmental level policy suggestions leading to the direction include specializing graduate programs, financial supports for Ph.D students at research focused institutions, designing advanced evaluation system of graduate education and its successful implementation. At each institutional level, it embraces securing talented human resources, student-lead education and research, revamping education and research supporting system of graduate school, reconstructing curriculum, facilitating interdisciplinary education and research, and globalize graduate programs.