Case Analysis of Utilizing Key Competency in Korean University

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Abstract: The Korean Ministry of Education emphasized the educational competency of the university and encouraged innovations in educational reform. As a result, each university has developed and implemented a competency-based education according to their educational goals. Competency-based education emphasizes the acquisition of comprehensive capabilities that can lead to a performance in a specific context, away from knowledge-based education. For this purpose, Curriculum, teaching-learning method and evaluation are carried out differently from existing education. The purpose of the study is to suggest implications for competency-based education of Korean universities. For this purpose, this research explored the case of competency-based curriculum and the method of teaching and learning by literature review. This study will be based on the introduction and implementation of the competency-base education at the university.

Keywords: Higher education, Competency-based education

INTRODUCTION

Competence - based education has attracted attention due to the arrival of knowledge and information society. Competency-based education emphasizes the ability to utilize information and knowledge beyond existing knowledge-based, delivery-oriented education. Korea 's higher education introduced competency - based education because of the government financial support project. Competency - based education leads to performance in specific contexts and emphasizes acquisition of comprehensive competence. Therefore, it emphasizes the active role of the education subject in terms of teaching - learning. It also has the advantage that the quality of education can be managed through learning results (Park, 2008)

However, most universities are unfamiliar the concept of competency and they are introduced uncritically and uniformly the competence model of economics. As a result, adverse effects such as the overlooking importance of theoretical knowledge, the vocational education of the school, and the dehumanization of education due to behavioral performance-based measures have appeared (Kim & Lee, 2013; Park, 2009). Therefore, this study proposes method that utilize a key competency model through exploring the used cases of key competencies in Korean universities.

THEORETICAL BACKGROUND

Competence is a characteristic of a performer who is able to perform successfully in actual performance (McClleland, 1973; 1999). For this reason, companies have actively introduced in the field of training and management to improve actual performance of individuals (Rothwell & Lindholm, 1999). Universities have traditionally been responsible for raising the intelligentsia as space for producing and circulating knowledge (Gibbons et al., 1997). However, a knowledge-based society is required people that have ability to use knowledge flexibly. In addition, as the number of institutions producing knowledge and technology increased, universities are needed a new role in addition to their existing roles. Universities should create an environment for continuous learning through the management of learners' academic achievement (Park, 2008).

As this social needs, Universities also introduced the competency model. The competency model is about systematic description details the core knowledge, values, and actions that contribute to the effective execution of a specific role and the creation of outcome (McLagan, 1989). The typical competence model presents competence level that measure the competency group, competence, and competence level for each competency. The data collected through these competency model is utilized across all areas of human resource management to the selection of talent, performance management, competency development and career path setting (spencer & spencer, 1993). The

competence model of the university can be used in many aspects of human resources management as the corporation. Many Korean universities systematically carry out a series of courses by deriving competencies according to their characteristics, operating and evaluating the curriculum accordingly. However, there is a lack of concern about the importance of the concept of competence and the relationship with the curriculum in school education (So, 2007). Therefore, this study suggests the utilization method in higher education through exploring the use case of key competence in higher education.

RESEARCH METHOD

In this study, we analyzed the literature data of universities for government financial support project (ACE + project) in order to confirm the use case of student 's key competence in Korean universities. Therefore, in this paper we selected two universities that developed, operated and evaluated competency-based curriculum by deriving their own competencies. Two universities

The analytical criteria were derived through literature on competency models. The detailed criteria are a) the method of deriving the competencies of each university, b) the development and operation of competency-based curriculum, c) the measurement of competency and utilization of results.

RESEARCH RESULT

G University

G University is a large-scale university in the metropolitan area, and has been carrying out the competency-based curriculum by attracting university financial support for the third year. G University selected education goals and talent awards based on the educational philosophy of the university and selected six key competencies as essential core qualities of talent awards. In order to practice the selected key competencies, G has reorganized its educational goals, curriculum, evaluation tools, and evaluation methods based on competencies and established a key competency improvement system.

First, the curriculum was mapped to key competencies in order to improve key competencies and professional competencies by department, and the certification institute diagnosed key competencies of students. Each department and college has developed a competency improvement roadmap based on the mapped capacity. Accordingly, each department and college developed and operated competency-based curriculum. When developing the curriculum, they mapped key competencies and professional competencies, and analyzed the status of key competencies and established a reflux system. To do this, they provided a key competency class design guide.

The developed curriculum consists of liberal arts curriculum, major curriculum, and non-subject curriculum. The liberal arts, majors, and non-subject curriculum have been developed to promote the mapped competencies, the convergence education has been developed in connection with the majors. The non-subject curriculum and liberal arts curriculum have developed the operating system by establishing an exclusive organization for the operation based on humanity. In the case of personality education programs, a certification system based on program participation and achievement is used. In terms of teaching and learning, they develop lecture course with TED-style and learner-centered learning communities.

The major curriculum emphasizes creative-hybrid education. The centralized institution developed a major education system and applied it to all subjects. The developed system suggests the essential elements of the entrance stage and the major stage. Each stage is required to provide information related to the department, to develop the roadmap of the department, and to develop the curriculum applied to the learner-centered teaching method. Especially, they tried to improve the students' interest and competence of IT through the lectures on coding education, idea tones, and hacker tones for non-specialists.

The quality of education is managed through the curriculum evaluation and certification institute. G university has developed a key competency CCI system as a way to continuously improve the key competencies selected by the university to develop a competency enhancement roadmap. The competency development roadmap developed in each department was posted on the homepage of the department to improve accessibility. In addition, the learner conducts the key competency test(K-CESA) for college students conducted by the Korea Vocational Training Center. The results are provided to students, departments, and related administrative departments. Students can use the results to make their portfolios and develop key competencies. In addition, departments and related administrative departments can utilize them to operate and improve the curriculum. Students' competency related data is provided through web and student can be checked through the integrated competency management system. In addition, G University revised the curriculum in 2018 and measured the improvement of key competencies and educational orientation distribution. These results were used as basic data for competency - based curriculum reorganization.

They tried to implement the quality management of education through analyzing and evaluating the data that collected in this teaching - learning process. In the process of teaching - learning, they develop a system that can predict the risk warning group of students. If they find risk student through intermediate achievement of the students, they provide counseling for them. They also developed an integrated management system and certification system for

students participating in various programs. In the major education, the certificate is provided to the students who are enrolled in the major program which is centered on excellent students by department. Comparisons and integrated certifications will be awarded with mileage based on the six key competencies, with a non-subject programs and competitions. This certification program enables students to manage their histories by providing a database of students' comparisons activities in Internet and mobile.

D University

D University is a local small and medium university, a religious foundation university. The university has also established a talented personality in order to implement the founding philosophy and achieve educational goals. Five key competencies were selected for the implementation of the university human resource awards. D University established an operating system for introduction / operation - measurement - evaluation / analysis - improvement - advancement / diffusion in order to upgrade the curriculum, and constructed a CMS system for curriculum quality and performance management. The professor designs a competency-based lecture plan for the competency-based curriculum and develops a new lecture model based on learner participation based on competency, lecturer's skill and learner needs. The curriculum is as follows.

In the liberal arts curriculum, they ran new liberal arts curriculum based on competency and reorganized into competency - based curriculum. The liberal arts curriculum periodically analyzed and managed the changes of the key competencies of the learners through the operation status and actual investigation. This university also developed the curriculum that is connected liberal arts curriculum, major curriculum, and non-subject curriculum to enhance the utilization of curriculum. In order to improve the student participation rate in the non-subject curriculum, the university operated the non-subject DAY by improving the academic system.

In terms of major education, this university carried out competency-based special education to enhance student's key competence. First, the CMS is operated for the quality and performance management of the major education, and selected major specific competency based on the needs analysis for each department. These data can be utilized as the data of curriculum reorganization, and can be used as diagnostic and performance evaluation data of major education. They developed a basic education certification model in connection with non-subject programs to strengthen basic education. In terms of teaching - learning, various educational methods are applied and supported to enhance core competencies. In each subject redesigned new curriculum with the contents, the teaching method, and the evaluation

method based on the key competency - based educational goals that the learner should cultivate in the subject. In order to improve the basic academic ability, the basic academic ability certification model was established for the academic subjects. According to the emphasis of convergence ability, the curriculum is redesigned to introduce a convergence curriculum that links similar disciplines. In addition, pragmatic education for linking with job sites was emphasized.

D university developed a competency measurement tool for quality management of teaching - learning activities. D University utilize key competencies, self-directed learning competencies, competency development, and comparison and evaluation data as tools for measuring teaching-learning outcomes. First, in order to measure student's core competency, D university use K-CESA and its own developed tools. K-CESA is used as data for comparison with other universities and its own development tools are used as data to identify the impact on competency of each major, liberal arts, non-subject curriculum. These results can be used to design learning activities and to teach students in related organizations, as it can confirm the growth trend of individual competence of students. The student portfolio provided by the university is composed of three stages of competence diagnosis, competency design, and competence development considering the stage of career development of the student, so that the student can directly check and manage his/her competence. Non-subject curriculums also include an assessment/feedback system for competency mapping validity analysis, key competency assessment, academy satisfaction survey, and undergraduate education satisfaction survey four times a year.

CONCLUSION

In this study, we tried to find out how to utilize competency in higher education by analyzing the cases of two universities. For this purpose, we selected two universities including the development, utilization, and evaluation of competence among the universities of the financial support projects in Korea. The analysis results are as follows.

First, in terms of key competencies, two universities are established talent awards according to the foundation philosophy and educational purpose of the university. G university derived a similar form of competency as the key competencies presented in the OECD DeSeCo project. However, in the case of D university, the competency name is renamed according to the philosophy of the university, and it is suggested to derive the specialization competency according to the characteristics of each department.

Second, in the course of deriving key competencies and establishing curriculum, each university implemented mapping key competencies in the subject to establish curriculum based on key competencies.

The lecture plan is required description that be listed in order to improve core competencies. The instructor designs instructional content, teaching methods, and evaluation methods for this purpose. In this process, G University takes a form to develop a common framework in universities and then to disseminate a leading model. However, there is a difference in that D university guarantees autonomy so that it can develop itself in the department, but takes the form of support from the teaching and learning development center.

Third, in terms of developing competency - based curriculum, each university is divided into liberal arts education, major education, and non-subject education. Both universities developed curriculum centered on key competencies, and there are attempts to link major, liberal arts, and non-subject. In addition, the content of education also showed a commonality of strengthening basic education and strengthening practicality. Specific instructional methods such as learner - centered instruction and capstone design are emphasized at the same time. This can be seen as a natural result for the purpose of strengthening the key competence to lead a successful life in the future society, but it cannot be overlooked that it originated from duplication of cases through diffusion and sharing of performance model among universities. Therefore, the attempt to develop various lecture models by utilizing the experience and know-how of the professors at D university is very necessary in terms of diversification of teaching and learning methods.

Fourth, as a tool for diagnosing learner's key competence, G-university uses K-CESA, a key competency measurement tool developed by Korea's vocational training institute, while D-university uses K-CESA and its own tools. K-CESA data is comparable between schools in that it is used. However, it is difficult to measure the competencies derived from the school itself. So that, it is necessary to develop its own tools.

Fifth, each university has various tools for quality management of competency-based curriculum. These results can be used as a portfolio data for self - directed learning for learner individuals, and they can be provided to department and administrative department to be used as data for improving the quality of curriculum and teaching and learning. However, in the case of D university, it is utilized variously as a standard of global leader scholarship, dormitory student RC program, comparison and program participant selection.

The purpose of this study is to analyze the use cases of key competencies in universities and to derive the direction of operation in universities. Universities are required to have a key competency curriculum in terms of nurturing talent to lead a successful life in the future society and quality management of university education. This study is meaningful in that it provides a variety of methods to analyze the key competence utilization in the university in terms of competency deduction, competency - based curriculum development and operation, competency measurement and utilization of results. However, there is a limitation in that it is based on the literature data presented by each university. In subsequent research, it is necessary to present abundant examples through in - depth interviews to supplement them.