Convergence Education of Curriculum and Extracurricular Activities based on Educational Philosophy of University

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Abstract

In these days, each university provides a new curriculum and various kinds of extracurricular activities in order to realize educational philosophy of its own. D university implemented curriculum-extracurriculum-integrated convergence educational system based on core competencies for students to be genuine talents with humanity, creativity and community mind. The students who participate in these educational processes are given a Competency-Index that shows how much they have tried to cultivate their competencies and how they have been accomplished. The results of convergence education of curriculum and extracurricular activities show that course achievement scores (Curricular-Index) have strong relationship with extracurricular activity scores (Extracurricular-Index) and the score distribution of Competency-Index differs by college.

1. Introduction

The educational philosophy of university or ideal human resources that the university aims for has a very important meaning because it determines what kind of educational model or strategy will be adopted and ultimately decides what type of talent the students will graduate from. All universities set their own educational ideologies and have their own unique educational model to realize the university's ideologies.[1] In addition, the universities set up core competencies appropriate to the ideal human resources of the university, and the curriculum is re-established and various kinds of extracurricular programs are provided, which are based on the competencies of universities. [2][3][4][5][6]

Many studies have shown that the extracurricular activities provide a variety of practical experiences that are not included in the regular curriculum, positively affecting intellectual achievement and cognitive development as well as the development of higher order thinking, psychological and emotional development, and college life satisfaction, etc. [7][8][9][10][11][12]

In order to fulfill the educational goals, extracurricular activities are very important because of a limitation of regular curriculum. However, students are reluctant to participate in

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the extracurricular program because the activities are not reflected in the grades and students do not think the activities directly help to raise their qualification.[13][14][15] Therefore, each university has diverse measures to encourage students to participate in these programs.[1][3]

To cope with this demand, D University in Korea established curriculum-extracurriculum-integrated educational system, which is based on the core competencies that the university pursues, and several universities are benchmarking them. In this paper, desirable curriculum-extracurriculum-convergence educational model in university is suggested by exploring D university's educational system in detail and interpreting the results of actual application of the educational model.

2. Competency-Index

2.1. Educational system based on core competencies

D university is a local private university which high school students of middle grades enter, and it needed a specialized educational system which fits the students' character and reflects the educational philosophy based on Catholic ideology. The university sets the ideal human resources as 'A talented person who is creative, has community mind, and practices love and service'. Therefore, the university sets up humanity, creativity, and community mind as the 3 core competencies and three sub competencies each under the core competencies as shown in [Table.1].

D university does not evaluate students' educational results just by grades (A+, A0,..) but by multi-dimensional assessment system. For this, extracurricular activities are emphasized as much as curriculum courses. The university is systematically managing and supporting what subjects each student took, which extracurricular activities one practiced, and what the results are, so that the students can be trained as genuine talents who cultivate core competencies.

Table 1. Core and sub competencies of D university

Core competencies	Sub competencies		
	1	2	3
Humanity	Love and Caring	Self planning / Self management	Responsibility and Leadership
Creativity	Major expertise	Ability to adapt	Integral problem solving
Community mind	Communication and Cooperation	Sharing and Services	Globalization capability/ Capability to understand multiculturalism

2.2. Competency-Index

A Competency-Index is an index which shows how much a student has put an effort to enhance each core competency which is the humanity, creativity, and community mind through curricular processes and extracurricular activities. This also shows how much educational results the student has achieved. As in [Fig.1], the Competency-Index consists of humanity, creativity, and community mind index, and each of the indexes is the sum of

Curricular-Index, which is course achievement scores and Extracurricular-Index, which is extracurricular activity scores.

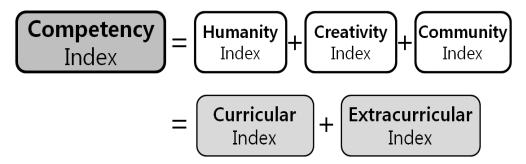*Curricular-Index = Number of credits×Converted grade score×Competency proportion (1)*

Figure 1. Components of Competency-Index

Table 2. Subject grades and converted grade scores

Subject grades	A		B	C	D	F
	100	90~	80~	70~	60~	~59
Converted grade scores	10	8~	6~	4~	2~	0

To get the Curricular-Index, the professor assigns first what competencies to educate in each subject. And then, when the semester is finished and the student receives subject grades, the Curricular-Index is calculated by formula (1) The converted grade scores are as in [Table.2]. For example, when a student takes a 2 credit subject with humanity competency 100%(for instance, Responsibility and Leadership 30%, Self-planning/Self-management 70%) and received a score of 92(A0), then the Humanity-Index student obtained through the subject is 8.4×2=16.8(Responsibility and leadership 5.04, Self-planning/self-management 11.76)

Extracurricular-Index = Equivalent credits× Evaluated score×Competency proportion (2)

The extracurricular program designer assigns competency proportion to each program just like the subject processes. However, since the extracurricular activities have no credits, an equivalent credit should be given to the program, which is proportional to the activity hours as shown in [Table.3]. Finally, when the students perform the activities completely, the Extracurricular-Index is calculated by formula (2)

Table 3. Equivalent credits of extracurricular activities

Activity hours	Equivalent credits	Examples of extracurricular activities
1h ~ 2h	0.1	All sorts of one-time special lecture
2h ~ 4h	0.2	Special lecture for employment, Diagnostic check
4h ~ 6h	0.3	Speaking and writing special lecture, Group activities
6h ~ 8h	0.4	Voluntary services, Speaking skill contest conference, Mentoring
8h ~ 10h	0.5	Voluntary services related to the major
10h ~ 20h	1	Supplementary study program, School academic seminar
20 ~ 30h	1.5	Club activities, National and domestic exhibition
30h ~ 40h	2	Student research community, National qualification certificate
40h ~ 50h	2.5	Long-term overseas dispatch program
50h or higher	3	Major courses foreign experience, Domestic and foreign internship, Newspaper journalist

3. Curriculum-extracurriculum convergence educational system

D university substitutes scholarship to the students who are awarded good grades in subjects only with genuine talented person scholarship system where students who have high Competency-Index receive the scholarship. In order to receive the scholarship in D university, the student needs to have not only an excellent grade in the subject but an effort to the extracurricular activities.

The important role for the professor to enhance the competency of the students is coaching the extracurricular activities to them as well as lecturing the subjects. Therefore, D university gives equivalent lesson time to the professors who coach extracurricular activities from 0.1 credits less than 2 coaching hours to 1 credit more than 15 coaching hours.

When a student participates in the extracurricular activity, the student receives an equivalent credit and the professor is given an equivalent lesson time. By improving the scholarship system for students and assessment system for professors in these ways, the competency based curriculum-extracurriculum convergence educational system goes along actively, which leads to multi-dimensional evaluation educational system in the university.

4. Results and discussion

4.1. Results of convergence education of curriculum and extracurricular activities

[Table.4] shows the results of the average *Competency-Index* obtained by students during one semester through taking courses in liberal arts and major courses and participating in extracurricular activities.

Table 4. Average competency-index obtained by students (Second semester, 2015)

Competency	Curricular-Index		Extracurricular-Index	Competency-Index
	Liberal arts	Major		
Humanity	13.15	9.17	6.76	29.08 (23.6%)
Creativity	18.75	36.73	10.31	65.79 (53.5%)
Community mind	12.93	8.38	6.88	28.19 (22.9%)
SUM	44.83 (36.4%)	54.28 (44.1%)	23.95 (19.5%)	123.06 (100%)

It was found that students obtained about 80% (36% of liberal arts and 44% of majors) of their Competency-Index in the curriculum courses and about 20% in their extracurricular activities. Competency-Index by core competency is 24% in Humanity, 53% in Creativity, and 23% in Community mind respectively. In liberal arts subjects, the proportion of humanity, creativity, and community mind competency is relatively balanced. On the other hand, creativity competency occupied a very large part in major subjects. The reason for this is that, in general, major courses focus more on major expertise, integral problem solving ability, and ability to adapt, which are the sub competencies of Creativity as shown in [Table.1]. This was more prominent in science and engineering subjects.

If a specific Competency-Index among 3 core competencies is not sufficient, the university should develop alternate courses or extracurricular programs so that they can focus more on this area of competency.

[Table.5] lists the average Competency-Index by college during the one semester. The students in college of pharmacy had the highest level of Competency-Index, but this is mainly because pharmacy students have to complete more credits in a semester, so they attained the highest Curricular-Index(course achievement scores) accordingly. The students in music or design college who have comparatively more opportunities for extracurricular activities have a relatively high Extracurricular-Index (extracurricular activity scores) On the other hand, the students in theological or medical science college had little extracurricular activities. Therefore, when selecting students with excellent Competency-Index, such as scholarship students, it is necessary to reflect the specificity of each college and we need to set standard to consider both Curricular and Extracurricular Index.

Table 5. Average competency-index by college (Second semester, 2015)

College	*Curricular-Index*	*Extracurricular-Index*	*Competency-Index*
College of Pharmacy	142.99	18.29	161.28
College of Music	101.05	28.24	129.29
College of Design	96.66	28.53	125.19
College of Theology	119.29	1.74	121.03
College of Engineering	92.98	20.69	113.67
School of Medicine	97.63	2.31	99.94
College of Natural Sciences	76.99	20.99	97.98
….	….	….	….

Table 6. Course grades vs. competency-index

Course grades	Curricular-Index ©		Extracurricular-Index (E)		C(=c1+c2) :
	2015(c1)	2016(c2)	2015(e1)	2016(e2)	E(=e1+e2)
Less than 3.0	184.04	180.01	55.47	50.84	77.4% : 22.6%
3.0 to less than 3.5	229.96	225.80	63.17	57.52	79.1% : 20.9%
3.5 to less than 4.0	253.92	249.19	66.81	64.37	79.3% : 20.7%
4.0 or higher	274.18	272.31	73.97	66.75	79.5% : 20.5%

[Table.6] shows the comparison of students' course grades and Competency-Index during the last 2 years. In order to get high Curricular-Index, students need to take a lot of courses or get high grades according to the formula (1) Since the maximum number of credits students can take during a semester is limited, students with high grades in the curriculum generally have high Curricular-Index. On the other hand, the Extracurricular-Index is, in principle, not related to the course grades. However, although the proportion of Curricular-Index in the overall Competency-Index is slightly increasing, students with higher course grades also had higher Extracurricular-Index as shown in [Table.6]. These results show that students with excellent grades are engaged in extracurricular activities much more and have good performance as well.

4.2. Expected effects of convergence education

Generally, students with middle grades in high school begin their college life with difficulty in examinations and grades, show passive tendencies, and fail to express their dreams and talents. The local private colleges have to mainly educate these middle-class students. The current educational system which is mainly focused on the theoretical curriculum is not appropriate for them. If the convergence education integrating the curriculum and the extracurricular activities is carried out, students can live a lively college life through various extracurricular activities and compose a portfolio of their college activities. By doing this, students will be able to prepare for employment and advance into society with their own story of college life, not with only GPA and TOEIC reports. This convergence educational system can be a new alternative model in local private universities.

5. Conclusion

The following conclusions were reached through investigating curriculum-extracurriculum-convergence educational model of D university.
1) In order to cultivate the core competencies that match the educational philosophy, all curriculum and extracurricular activities were reorganized based on competencies.
2) A Competency-Index was developed, which shows what kind of effort and result the students have made to cultivate the core competencies of humanity, creativity, and community mind through curriculum courses and extracurricular activities.
3) By evaluating, managing and supporting the Competency-Index of students, an educational system was developed that trains genuine talents with core competencies.
4) As a result of implementing curriculum-extracurriculum integrated educational system, it was shown that students with high curriculum achievement scores(Curricular-Index) showed higher extracurricular activity scores(Extracurricular-Index) as well and the score distribution of Competency-Index differs by college.
5) Through this curriculum-extracurriculum convergence education, students were able to make a lively college life and to create portfolio of their college life stories and to prepare

for employment and advance into society.

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