
GC 2012-5645: THE EDUCATIONAL EFFECTS OF COURSE PORTFOLIO IN KOREAN ENGINEERING EDUCATION

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The Educational Effects of course portfolio in Korean Engineering Education

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1. Is it alternative to choose just one? : Research or Teaching?

Generally the definition and scope of faculty work in Korean higher education traditionally involve research, teaching, and service. However, after Brain Korea 21 Project (1999~2005), at the many research based institutions, the focus of evaluation has become to move from undergraduate education to research. Most professors in Korean engineering colleges have been mainly concerned about research productivity, while showing indifference to the quality of teaching because they were largely evaluated on publications in SCI-rated research journals in order to be successful in tenure or promotion. If a professor's research performance is competent, students' poor rating won't be an issue. The faculty evaluation of teaching has not been considered as important as research. Moreover, it used only rating scale of number of lecture and students' course evaluations using quantitative assessment, which made many faculties become unconcern to teaching. They know the fact that teaching should be equitable with research, but they cannot help putting priority on research. Faculty's indifference to quality teaching has been problematic, which has lowered students' motivation to study engineering. That leads to the slowing down industrial and technological development steadily.

As Ernest Boyer, the president of Carnegie Foundation for the Advancement of Teaching, asked the higher education community to consider expanding the meaning of scholarship criticizing the research oriented trends, the Korean engineering community strived to improve the engineering education level as well as research. One of the efforts for the Korean engineering education improvement and faculty development was a Course Portfolio

2. What is the Course Portfolio?

Since Boyer (1990) published his report on teaching in *Scholarship reconsidered: Priorities of the professoriate*, the scholarly function of teaching has received the great attention. Along with the overall discussions on Scholarship of Teaching (SOT), the idea of using a portfolio was accepted as a form of documentation for demonstrating SOT.

AAHE defines the course portfolio as a document in which faculty displays their design, implementation, and assessment of a single course (Hutchings, 1998). It is compiled to accomplish four goals: to facilitate the retaining of information and process within a course; to encourage scholarly inquiry; to reduce feelings of isolation; and to be rewarded for excellence in teaching (Hutchings, 1998). The course portfolio can be the appropriate method to show the evidence of scholarship of teaching and learning.

3. The Increase of the Course Portfolio by ABEEK Evaluation

In 1999, the community of engineering educators and policy makers established the Accreditation Board for Engineering Education of Korea. ABEEK began its evaluation for accreditation in 2001. By 2011, ABEEK has accredited 651 programs in 97 institutions. ABEEK has contributed to improving the quality of engineering education in Korean universities for over a decade.

Every accredited program should evaluate the achievement of the educational objectives and program outcomes and apply its result towards the continuous improvement of the program. For the continuous improvement of the program, it is necessary for the engineering professors to understand the pedagogy and to explore the practice of teaching. The creation of a course portfolio would provide faculty with such an opportunity. The process of creating a course portfolio furnishes professors with the reflection of teaching in classroom and affects to improve the Korean engineering education quality.

Prior to the ABEEK's requiring course portfolios as an element in accreditation evaluation, faculty members in most Korean engineering programs were not familiar with the concept of the portfolio. ABEEK requested professors/instructors to create a course portfolio that a collection of syllabus, course materials prepared for students, examples of assignments, exams, students' list, student reports, student evaluation, the Continuous Quality Improvement (CQI) report, etc. The CQI report is the reflective statements pointing out problems and shortcomings and proposing specific class plans for improvement and suggestions for the environmental supports. Though it

may be a little different from the course portfolio in U.S, it gave the Korean engineering faculty members opportunity to reflect their teaching.

At first most faculty members opposed and criticized the course portfolio requirement vehemently, primarily because they felt documenting needs an extra work and time to compile materials. At early time, most faculty members tried to attach value only to gather the materials. But they have continued to create the course portfolio and have written CQI and reflected on and assessed teaching practices at every semester for ten years. Creating the course portfolio process might have empowered many faculties to teaching. If only one professor in the 651 programs accredited by ABEEK reflected his/her teaching via a course portfolio and improved one's teaching, which might make over 10,000 students experience better class at least.

4. The Perception of Engineering Faculty to the teaching evaluation

Recently the department chairs and deans begin to think the necessity of the qualitative evaluation like portfolio evaluation and peer's reviews. Especially they considered the course portfolio as an appropriate method of faculty assessment. When we looked at the data from Korean engineering faculty (Cho, et al, 2009), only 28.5% out of 221 respondents were satisfied with current faculty evaluation system (table 1). 69.1% out of 223 respondents agreed that it was necessary for the faculty evaluation system should change (table 2). 76.5% of 217 agreed to increase the ratio of teaching in evaluating faculty performance. 92.7% of 218 respondents agreed to use course portfolios for faculty evaluation.

Table 1: Faculty's satisfaction of evaluation system

Degree	N	%
Very dissatisfied	9	4.1
Dissatisfied	46	20.8
Neutral	103	46.6
Satisfied	55	24.9
Very satisfied	8	3.6
Total	221	100.0

Table 2: The necessity of the change of evaluation system

Degree	N	%
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Very disagree	4	1.8
Disagree	8	3.6
Neutral	57	25.6
Agree	91	40.8
Very agree	63	28.3
Total	223	100.0

Effective evaluation of teaching requires that the context of the teaching and learning be considered. The creation of a course portfolio would provide such an opportunity of reflection on teaching. But Murray (1997) insisted that we should consider the purpose for compiling them. The most tragic outcome that could befall the movement toward using teaching portfolios in higher education would be to standardize the process and the evaluation. It is very important to allow the professional to show individuality and creativity in achieving the mission of profession..

In Korea, the accreditation system with global standard contributed to quality improvement of engineering education. But faculty became busier than before. They wrote self-report for program evaluation and met students for counseling and created course portfolio and evaluated students' outcome assessment. The time to do for education increased, but research criteria for promotion did not decrease. Administrators wouldn't lessen the quality and the quantity of the research performance. Now we should try to do the balance of teaching and research.

Recently Yonsei University revised the regulation of faculty evaluation committee. The changed rules about teaching evaluation are as follows:

It is the faculty's responsibility to create the course portfolios and faculty should be assessed when professors are promoted.

In addition, they are recommended to get assessment and advices about lecture methods through video review from the Center of Teaching and Learning.

They should record the result of counseling with students at least two times a semester .

Such revised regulation of Yonsei University is expected to change the environment from research to education gradually.

Also the successful use of portfolio requires that a substantial change in the prevailing

cultures of higher education. Such changes will not be successful or sustainable without effective departmental leadership (Murray, 1997). Implementation of portfolio for faculty assessment requires special cares. Therefore we have tried to make faculty members believe that process and procedures of the evaluation are reliable, valid and fair.

5. Conclusion

In Korea, universities and colleges have concentrated on ranking and classifying the faculty by the number of publication in SCI-rated research journal, which lead to indifference to teaching of most engineering faculty. Now we try to find the way how to get balance between research and teaching. It is time for the faculty in Korean engineering colleges to develop faculty ownership for their own career growth and to harmonize teaching and research.

Course portfolios can be a very effective method for identifying and validating quality of teaching. Most engineering faculty members in Korea agreed that the course portfolio was appropriate method for faculty evaluation. It is expected that the successful use of course portfolios for faculty development will make a substantial change in the cultures of Korean higher education.

Referance

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