English Abstracts

Activities of CSHE for Supporting Faculty Development in Nagoya University

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The purpose of this paper is to clarify the actual condition and some problems of faculty development (FD) in Nagoya University. Our findings are as follows:

1. Nagoya University attaches importance to faculty development which is prescribed in the mid-term plan and annual plan (2006).

2. As for general education, the Institute for Liberal Arts and Sciences organizes FD twice a year. It can be said that their FD is well-organized because many teaching staff participate in it. The Institute also implements the course evaluation system for monitoring students' response to all classes at the end of every semester.

3. As for FD in various other schools, it is not so well organized because it is difficult for them to gather together many teaching staff and to discuss improving the quality of teaching. But there is growing recognition of the importance of FD in graduate schools because the number of students tends to increase in graduate schools and their academic aptitudes and skills are highly diversified.

4. It is important to improve the quality of FD programs, to organize activities other than group meetings, and to develop FD for classes in graduate schools.

5. We must prepare for a new situation. The Revised Decree on Graduate Schools prescribed that each school must implement FD.

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Professional Education of Law and Faculty Development Activity through Computer Tools:
A Case Report on Nagoya University Law School

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This paper reports on the faculty development activity of Nagoya University Law School. The new law school system was introduced in 2004. The law school is a professional school in which its education is to cover both theory and the practice of law. To ensure the success of professional legal education, extensive collaboration between academic lawyers and practicing lawyers is essential. To improve this collaboration and in turn class teaching, the faculty development, often referred to as "FD", is believed to be critical.

Therefore, Nagoya University Law School attempted to generate an environment where all parties to professional education, such as the teaching faculty, law students and off-campus professionals, will be flexibly connected through a computer network. Information and communication technology could create a dynamic web of collaboration that overcomes the limitations of time and space. The school developed various computer tools to improve the teaching and research of the law school faculty, the services of the school, the efficiency of management, and the learning environment of law students. These tools are also effective for FD activities. Our FD emphasizes the approach of "learning by doing" and encourages exercise and mutual learning rather than lecturing. In this paper we introduce some computer tools and describe how we utilize them for effective FD.

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Innovative Educational Restructuring and Faculty Development (FD) in School of Agricultural Sciences of Nagoya University

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The School of Agricultural Sciences of Nagoya University was reorganized to consist of three departments in April 2006. The characteristics of this reorganization reflect out own recognition of the problems that occurred in the previous two departments system. The result was an innovative restructuring of the educational system resulting in a reorganization of departments. We consider the process to assess and improve the educational system as FD in a broad sense. Accompanying the higher development of scientific technology and creation of novel academic fields, comprehensive and interdisciplinary education should be offered in universities. This innovation resulted in an education system in which students obtain "the true specialty based on all-round knowledge". General common education is offered in the first and second academic years and specialized education in the third and fourth final academic years. The students in the first academic year in 2006 experienced the new curriculum under the new three departments system. As a result, there was a gap between the level of educational achievement targeted in this educational program and the level of actual achievement. To improve the situation, we strengthened teaching methods, assessment of academic results, introductory education, and re-examined our teaching and learning system.

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Towards a More Effective Faculty Development Program

AMANO Masachiyo

Since Japanese national universities were partially incorporated in 2004, various types of evaluation of university education have kept coming down. If these evaluations prompt professors to provide better education for their students, they should be welcomed and professors should attempt to develop a faculty development program and learn skills needed to create more helpful syllabi, homework, handouts, and tests. This essay claims, however, that there are even more fundamental problems than faculty development that should be paid more serious attention at Japanese universities. It is argued that we should reconsider such factors as the length of class hours, internal physical environments of classrooms, basic equipment in classrooms, and the number of classes or courses that professors must teach a week, and so on. In particular, we give special consideration to the length of class hours in this paper. However, without comprehensive consideration of these problems, even a well-organized faculty development program will not work at all, and thus all efforts made so far and in the future will go nowhere.

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The Student Evaluation of Undergraduate Education in Japan and Australia: A Comparative Analysis of the Results of Student Course Experience Questionnaire Conducted by Nagoya University and the University of Sydney

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The purpose of this paper is to discuss the significance of the Student Course Experience Questionnaire (SCEQ) through a comparative analysis of the SCEQ survey results administered by Nagoya University and the University of Sydney in 2005.

First, through this comparative analysis, we find that Nagoya University's undergraduate education is characterized by three scales, namely, "General Assessment, Cooperative Learning, and IT and Learning," while the undergraduate education at the University of Sydney is characterized by six scales, that is, "Good Teaching, Clear Goals, Appropriate Assessment, Appropriate Workload, Generic Skills, and Learning Community."

Second, Nagoya graduates recognize that their undergraduate education emphasizes a "memorization-centered, surface-atomistic approach" to teaching and learning, though they view their *alma mater* as a distinctive community of research. In contrast, Sydney students consider that their education stresses "research-led learning and teaching" characterized by a "student-focused, deep-holistic approach" to learning.

The SCEQ survey will be a unique educational instrument for evaluation and quality assurance only when the validity of these scales will be fully recognized and SCEQ will be utilized as a means to promote the continuous improvement of learning and teaching.

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An Examination of a System of Data-driven Teaching and Learning Improvement: "The Albany Outcomes Assessment Model" at The State University of New York at Albany in the United States

TORII Tomoko

The aim of this paper is to analyze the SUNY-Albany outcomes assessment model and its system of data-driven teaching and learning improvement. Such an assessment is highly relevant to Japan's efforts to improve the quality of its universities. In the paper there is an examination of the functions of Institutional Research (IR) at Albany such as collecting, monitoring, and analyzing data, to generate feedback which enhances the university's decision making, particularly as it relates to effectively improving teaching and learning.

1. The Albany Outcome Assessment Model utilizes a formative and multi-level evaluation approach in assessing student outcomes, which consists of various cohort studies.

2. Under the decentralized management system at Albany, the data which are collected by surveys are utilized in various efforts in support of teaching and learning improvement at all levels.

3. Through the careful coordination of three major functions, namely, "data collecting, analyzing, and reporting", "planning and evaluation", and "professional development for teaching and learning", Albany uses a bottom-up approach to improve teaching and learning.

Albany does not use the data in the assessment of faculty's performance. Albany is directing attention to use outcomes assessment data only for its data-driven decision-making to improve teaching and learning.

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Development of Study Tips for Involving University First-year Students in the Academic Community

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The Center for the Studies of Higher Education of Nagoya University released "The Study Tips for First-year Students at Nagoya University" in March 2006, and distributed them to every first-year students at the orientation in April. The tips consist of two booklets: Volume 1 "What is a Scholarly Citizen?" and Volume 2 "Aim for Independent Learners" (Both are in Japanese). The Center emphasizes the engagement of undergraduate students into an academic community and upholding the learning goals.

According to some quantitative research, the first six months in the first-year of college study has a crucial influence on student development. Therefore, the Center considers it critically important to convey the university's official and academic messages to first-year students as soon as they enter the university. The study tips are targeted for the top-ranked students who already have a high learning motivation. The Center wishes to upgrade them to be much more conscientious and independent learners so that they will become catalysis to lead and inspire other first-year students.

The study tips at Nagoya University can be classified as "faculty-guided" tips which mainly focus on the learning activities while many other universities have created "senior students-guided" study tips which place emphasis on the daily life of students such as part-time jobs, and various club activities.

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Strategies to Support Graduate Students in Research Universities as a Means for Preparing Future Faculty

CHIKADA Masahiro

This paper examines the ways to support graduate students in Japanese research universities for becoming future faculty, based on a comparison of the training systems of teaching assistants (TA) between the US and Japan.

On the one hand, some research universities in US allow TAs to teach courses independently and have enough training opportunities prepared to be future faculty. On the other hand, TAs in Japanese universities are limited to supplementary jobs and they are not allowed to teach independently. Consequently the training system for TAs in Japan is not organized and systematized.

To enhance the teaching competence and incentives of Japanese graduate students, three strategies are proposed. Firstly, not only the orientation for their supplementary job, but a training system similar to faculty development workshops such as developing effective syllabi and learning pedagogy is essential. Secondly, not only an orientation when TAs are recruited, but a variety of training and supporting opportunities encompassing the full range of graduate education should be provided such as welcome reception, consultation, writing CV seminar, and micro-teaching experience. Thirdly, research universities should recognize the importance of TA training for future faculty.

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Student Affairs Educators in the U.S.: Principles of Good Practice Developed by Professional Associations

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This paper aims to clarify the roles of student affairs professionals in the U.S. through analyzing the document: "Principles of Good Practice for Student Affairs," which was developed by a collaborative research group of the two leading professional associations in this area, the American College Personnel Association and the National Association of Student Personnel Administrators.　The findings from the analysis can be summarized as follows:

- The "Principles" incorporates wide-ranging and in-depth feedback from large number of student affair professionals belonging to those two associations.

- Student-learning-oriented student affairs is expressed as a desirable goal in the "Principles."

- The "Principles" includes an inventory which consists of means to operationalize the principles for the practice of student affairs professionals.

- The "Principles" can be applied in many varied higher education institutions with diverse groups of student and campus cultures.

- The "Principles" emphasizes shared responsibility and partnerships for students' learning.

These findings clarify the expectations that professional associations have for in higher education institutions.

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Improvement of the Quality of Graduate Education in France: Foundation and Improvement of the 'Ecole Doctorale'

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The purpose of this paper is to clarify the process and some characteristics of graduate education in France, 1990-2006. The basic findings are as follows:

1) The French government started the reform of graduate education from the end of the 1980s. Then graduate education was implemented as the third cycle of university. At the first step, a DEA cycle offered education of one year with school style, but beyond it there was no methodological education.

2) Under the pressure of the shortage of university teaching staff and international economic competition, the government introduced a plan to increase the number of graduate students. The government decided to reform the structure of the third cycle by creating 'Ecole Doctorale' combined with the DEA cycle, and the doctoral cycle, and implementing the methodological education in doctoral cycles. Teaching staff teams which are composed of researchers of some laboratories whose research themes are similar are responsible for offering education indispensable for future researchers, education of each discipline, education of interdisciplinary knowledge and methods, training in foreign languages, and preparing for finding jobs after completion of the dissertations.

3) The government decided to diffuse the contract of dissertations which prescribe the rights and responsibilities of teachers and students to accomplish effective completion of dissertations. It is said that the contracts have been a possible method for assuring and improving the quality of graduate education.

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Career Management of Contract Research Staff in UK Universities

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The present paper reports a study of the British case of improving career management of contract research staff (CRS) in universities through literature survey, which derives implications for policies on science and technology personnel and for university strategies on human resource development in Japan.

Recently, the Japanese government has demonstrated more concern about science and technology personnel and just initiated programs to support independent research and career-path diversification of young scholars. The projects supported by those programs have been carried out dispersed widely throughout Japan, while the British case involves a focused coordinated way of improvement; a creer-management standard has been provided through a nation-wide concordat with signatories of university principals, funding agencies, and academic societies, followed by financial support to and monitoring of pilot good-practices. Features differentiating the British case from the Japanese approach have been clarified as better awareness of CRS in universities, training research managers, developing tools and handbooks on career management, and systematized career management.

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Is the Term for the Newly Established "Jokyo" as an Academic Profession Appropriate? : An Analysis from a Comparative Viewpoint among Japan, Korea and China

UMAKOSHI Toru

Generally the term "Jokyo"(assistant) has been used as the lowest status of an academic profession in East Asian countries such as Korea and China for a long time.   Thus far, it has been considered the same as the Japanese term, "Joshu"(assistant).   However, recently in Japan the newly established "Jokyo" is to be introduced as an independent teaching and research profession equivalent with the non-tenured "assistant professor" position in the United States. Although the Japanese Education Ministry and its Central Education Council justifies an introduction of the new status of "Jokyo" in terms of "international equivalence" and "traditional usage of Japanese language", it may become an irretrievable loss for Japanese academics in the East Asian academic community.   The new Japanese "Jokyo" will be surely regarded as the same as the "Jokyo" of Korea and China because those Chinese characters are exactly same. Through an analysis from a comparative viewpoint among Japan, Korea, and China, an amendment is proposed to the revised School Education Law, suggesting that the Japanese "Jokyo" should be changed to a new category "Jokyoju"(assistant professor) which is similar to   the Korean "assistant professor" and Chinese "lecturer" in terms of roles and functions.

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Teaching of Basic Sciences in Research Universities and the Role of the Teaching Assistant

OGASAWARA Masaaki

In this paper we focus our attention on the teaching of basic sciences in research universities in Japan. In comparison with those in the United States and the United Kingdom, more professors are engaged in the teaching of a smaller size of classes. The teaching method is based on elitism in the sense that it is adequate for well-selected students but not necessarily for diverse ones. The teaching skills adopted in research universities are archaic in general and their average level remains at the level of the 1970s in the United States. A kind of course which is called "sciences for all" in the United States is urgently necessary as a freshman course in undergraduate programs. The issues to be solved in this stage of education are classified into three categories: one is concerned with inconsistency and defects in curriculum, second is a weakness or lack in support for teaching, and the third is unsatisfactory infrastructures for "modern" teaching. To improve the situation, we propose to reconsider the learning strategy in the field of basic sciences, to develop a new style of class attractive for contemporary students, and to introduce teaching assistants with appropriate teaching skills.

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Problems Associated with the Introduction of Active Learning

MIZOKAMI Shinichi

This article examines practical problems related to classes and curricula of active learning as a typical learning style reflective of the basis of the postmodern school education. In this new genre of education teachers can't always stand in front of students to teach stable and fixed knowledge, students' learning processes could go beyond the range of knowledge and ideas teachers have to a great extent, teachers may not be to demonstrate their clear knowledge and answers to students, and they could be even taught by their own students. As the result of the analysis of articles reviewed, it was found that active learning, whether as problem exploring or as problem solving, was widely used regardless of discipline. And, enrichment from exposure to other views, extra-class support, and curricular support were also found to develop further the quality of students' active learning. Finally, curriculum-based active learning was discussed, drawing upon the theory of curriculum.

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What Is and What Ought to Be "Engineering Ethics Education"?

TODAYAMA Kazuhisa

A decade has passed since engineering ethics education was introduced into universities in Japan. However, the present situation seems still chaotic. Because engineering ethics and education for it started as a reaction to ABET (The Accreditation Board for Engineering and Technology) and/or JABEE (the Japan Accreditation Board for Engineering Education), the sense of ownership on the side of working engineers is quite immature and there is no consensus on what to teach and how to teach it. What is needed is to shift (1) from reactions to external pressures to acting on one's own initiative, (2) from trial-and-error practices by each individual instructor to collaboration among engineers, philosophers, engineering professors, and citizens.

To realize these changes, engineering ethics should be regarded as a part of a social movement which aims to improve engineers' social status as professionals. The history of engineering ethics in US is briefly surveyed. That has important implications for Japan, namely, that when we think about what to teach in engineering ethics education and how it should be done, it is important to consider these problems against the background of the social systems which give substance to engineering ethics and make it work in real life situations.

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Development of a Learning Support Tool Based on Peer Review for a Programming Class

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Learning models such as cooperative learning and mutual learning are found to be effective in classes using personal computers. Peer Review (PR) is one of the models of cooperative learning. In the PR, each student plays a role as a reviewer or programmer; a programmer's work is checked and evaluated by a reviewer; and in doing programming, errors are corrected and uncertain points are clarified according to the discussion with a reviewer. The introduction of PR results in a reduction of programming errors and students can acquire programming techniques they could not come up with by themselves. In this research, the learning support tool based on PR is developed to avoid bias, to provide an environment in which students can study cooperatively, and to have mutual support mechanisms.

The tool is comprised of the editing function of the source program, the chatting function, and the compiler-cooperating function. The use of the tool allows users to compare source programs and discuss critically programming skill with the chatting function.

A questionnaire survey indicates that the tool is effective for developing a cooperative learning environment and enhancing programming skills, and that the design and the function of the tool should be revised as well.

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