Information Letter

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This letter informs of an overview of my TRIZ activities at Osaka Gakuin University (OGU) in Japan, especially with an emphasis how research, education, application, and proliferation of TRIZ have been promoted in OGU and in Japan.

TRIZ, a methodology for creative problem solving in technology, was introduced into Japan in 1996-1997 through USA. I encountered TRIZ at an introductory seminar in 1997. Since I was a staff manager at Fujitsu Laboratories Ltd. at that time, I studied TRIZ seriously and tried to introduce it in Fujitsu's research laboratories for one year. But it was too early for Fujitsu engineers and managers to accept TRIZ at the stage when information/literature and skilled persons were rare. In many industrial companies in Japan, there were pioneering engineers like me but had difficulties in understanding and using TRIZ. Much work and time apparently needed. A TRIZ users group organized by Mitsubishi Research Institute served for promoting TRIZ in industries and I joined it actively.

I moved to Osaka Gakuin University in April 1998. OGU is a private university dedicated for education as an ordinary, non-prestigious, university having about 10,000 undergraduate students. It started in 1960s in the field of commerce and gradually added faculties of law, international culture, etc. I joined OGU when it was preparing for the start of Faculty of Informatics in 2000. At first I taught students of other faculties on introductory computer science and practices of information processing, etc. I built my Web site "TRIZ Home Page in Japan" for a demonstration to students in my practice class, and openly published it in Japanese on Nov. 1, 1998 and also in English on Nov. 15, 1998. This Web site has been updated actively for these 18 years, posting many useful articles and papers written by many authors beside myself, and has been evaluated highly not only in Japan but also in the world.

I did research on TRIZ mostly in collaboration with industrial users in Japan and by attending at international TRIZ conferences. I published, as the supervising translator, Japanese editions of classical TRIZ textbook by Yuri Salamatov and modern TRIZ textbook by Darrell Mann. Besides TRIZ, I found USIT (Unified Structured Inventive Thinking) useful.

USIT was originally developed by Ed Sickafus, as a streamlined process for creative problem solving, under the influence of TRIZ. I chose USIT as a methodology easy to understand and effective for application. My research was focused on reorganizing all TRIZ methods into USIT in a unified manner. This resulted in the System of USIT Operators (in 2002). And the overall process of USIT was reformulated into the Six-Box Scheme, which was found to be a New Paradigm of Creative Problem Solving (in 2004). These research findings were mostly stimulated in and fed back to workshops which I carried out with engineers coming from various industries.

In the newly built Faculty of Informatics of OGU, I taught, among others, the course of 'Methods of Creative Problem Solving' to 2nd year students, focusing on TRIZ, USIT and related methods. For the thesis works, the students choose their seminar classes at the start of their 3rd year. 2 to 5 students per year joined my seminar class, on the topic of 'Thinking Methods of Creative Problem Solving'. I used various familiar problems in everyday-life for practicing together the ways of thinking. The students in my seminar class chose a problem each and, after discussing together in the class, wrote a thesis on how he/she thought and solved the problem. Later in 2010, I had another type of seminar class of 10 students at the 2nd year. I guided the students in a workshop style, without lectures, on the topic of 'A large variety of writing instruments' for studying the evolution of technologies of familiar items. Lecture notes of the course, several works of students' theses and the results of the seminar class, mentioned above, were presented at TRIZ conferences in Japan and in USA/Europe. These case studies developed by students are found illustrative for students and even for engineers.

In parallel of teaching at OGU, I made much effort for proliferating TRIZ. We organized Japan TRIZ Society (preparation in 2004 and officially in 2007), where I was a founding board member till 2012. We also organized Japan TRIZ Symposium every year since 2005, having 100 to 200 participants, of the nature basically all-Japan and partly (but as much as possible) international. I served Program Chairman of the Symposia for 8 years from 2005 through 2012. I myself presented my TRIZ/USIT works in Japan TRIZ Symposia and in ETRIA TRIZ Future Conferences every year (and in TRIZCON in USA several years). The TRIZ Home Page in Japan has been a very important medium for TRIZ promotion.

I retired OGU in 2012 at the age of 71, but I am still working actively in the field of TRIZ as Professor Emeritus of OGU. The university supports me with the Web server for the TRIZ Home Page in Japan. My research has recently made good fruits: The idea of 'Six-Box Scheme of USIT' has been extended much into the concept that 'Six-Box Scheme' is the New

Paradigm of 'General Methodology of Creative Problem Solving (CrePS)'. CrePS is the (higher level) methodology which integrates many different methods including TRIZ, USIT, VE, TOC, Six-Sigma, Lean, Brainstorming, Innovation methods, etc. etc. The Six-Box Scheme updates/replaces the conventional 'Four-Box Scheme of Abstraction' of problem solving which is widely assumed so far in science and technology. By virtue of this new paradigm, many different methods competing so far in confusing manners are possible to be integrated and unified in the general methodology CrePS. USIT is a simple-to-learn and yet effective-to-apply process of Creative Problem Solving with the Six-Box Scheme. USIT is well established already and documented fully recently in the form of USIT Manual and A Collection of USIT Case Studies. The works I made with my students at OGU are included significantly in these Manual and Collection of Case Studies.

Before closing, I should mention three weak points in my TRIZ activities at OGU. (1) Even though I tried to teach/train my students as much as possible, I am not sure how much the students actually have acquired the way of creative problem solving and how much their learnings are useful in their lives. (2) OGU does not have any research groups. Professors and Lectures are working for education of undergraduate students and are doing research separately. Since every teacher has their own specialty (intently distributed widely), joint research work is very rare, unfortunately. (3) The course and the seminar classes are carried out as official teaching in the curriculum, but the contents of them will change by the decision of teachers. TRIZ-centered contents may not be carried out after my retirement.

As described above, TRIZ and its extensions have been introduced and taught actively in Osaka Gakuin University from 1998 through 2012. It is a pioneering work in Japan and in the world. Education of undergraduate students with the Way of Thinking for Creative Problem Solving is a significant activity. Research, application, proliferation, promotion of TRIZ and its extensions were carried out in parallel to the education and having good mutual interactions among them. Details of all these activities are fully documented and published in conferences and in the Web site "TRIZ Home Page in Japan" both in Japanese and in English.

"TRIZ Home Page in Japan": http://www.osaka-gu.ac.jp/php/nakagawa/TRIZ/eTRIZ/

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