The First Career Development Workshop for Undergraduate and Graduate Students
“Building up your skills during student days - For success in society”

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I. INTRODUCTION
The 1st Career Development Workshop for Undergraduate and Graduate Students “Building up your skills during student days - For success in society” was successfully held on Saturday, June 20, 2009 at Kogakuin University. The workshop was hosted by IEEE Japan Council WIE (Women in Engineering), IEEE Tokyo GOLD Affinity Group, IEEE Tokyo Denki University Student Branch, and Japan Society of Kansei Engineering. This report introduces the outline and the atmosphere of the workshop and the results of the questionnaire research for participants.

II. WORKSHOP OUTLINE AND GOALS
i. Goal of the Workshop
This workshop, which targeted young researchers of undergraduate and graduate students, was aimed at helping them to broaden the view on their future path and relevant skills. The workshop was held on such themes as “how to shape my career,” and “how am I going to find a job after the Ph.D. course”. These themes were set because it is important to make necessary preparations for getting the good opportunity so that we can spend our lives actively in the future society.

ii. Workshop Contents
We invited 7 young researchers as facilitators, who are engaged in the activity in industry and research and educational institutions for about 10 years.

Participants were separated into 7 groups (A to G) based on the theme as the table below shows. Role of the facilitator was to control the discussion based on his/her experience and to give participants the adequate role model. Each group was accompanied by a supporter who facilitated the discussion and recorded the session.

iii. Schedule
The workshop was carried out as below.

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00-</td>
<td>Registration,</td>
</tr>
<tr>
<td>13:30-</td>
<td>Opening Remarks: Hideko KUNII (IEEE JC WIE Chair, Ricoh Software Inc.)</td>
</tr>
<tr>
<td>13:40-</td>
<td>Introduction of facilitators</td>
</tr>
<tr>
<td>14:15-</td>
<td>Change of facilitators / Short break</td>
</tr>
<tr>
<td>14:25-</td>
<td>Workshop</td>
</tr>
<tr>
<td>16:00-</td>
<td>Summarizing the Discussion in Each Group</td>
</tr>
<tr>
<td>16:50-</td>
<td>Closing Address: Hisao SHIIZUKA (JSKE Chair, Kogakuin University)</td>
</tr>
</tbody>
</table>

■ Social hour
MODERATOR : Shiho NAKAMORI (JSKE, University of Tsukuba)
17:30-17:40 Opening Address and Toast: Hideki IMAI (IEEE Tokyo Section Chair, Chuo University)
19:20-19:30 Closing Remark: Yoshihisa MIKAMI (Tokyo Denki University IEEE Student Branch Chair)

<table>
<thead>
<tr>
<th>Group</th>
<th>Name</th>
<th>Affiliation</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Masaya ANDO</td>
<td>Advanced Institute of Industrial Technology</td>
<td>Skills that should be acquired during schooldays with a scope of 10 years</td>
</tr>
<tr>
<td>B</td>
<td>Takahiro IIJIMA</td>
<td>IBM Japan, Ltd.</td>
<td>Career planning for ourselves</td>
</tr>
<tr>
<td>C</td>
<td>Chihiro TAKANO</td>
<td>National Institute of Advanced Industrial Science and Technology</td>
<td>Building the career as a female researcher</td>
</tr>
<tr>
<td>D</td>
<td>Tomohiro HASHIGUCHI</td>
<td>Fujitsu Laboratories Ltd.</td>
<td>Thinking about the future career during schooldays</td>
</tr>
<tr>
<td>E</td>
<td>Hiroki HARADA</td>
<td>NTT DoCoMo, Inc.</td>
<td>Difference of the research activity during the schooldays and after getting jobs</td>
</tr>
<tr>
<td>F</td>
<td>Kinuko YASUDA</td>
<td>Google Inc.</td>
<td>Skills required in foreign companies</td>
</tr>
<tr>
<td>G</td>
<td>Emi YANO</td>
<td>Ricoh Software Inc.</td>
<td>Career change and skill development</td>
</tr>
</tbody>
</table>
III. ATMOSPHERE OF THE DAY

There were total of 77 participants (53 of them were students, 24 of them were others). Total of 58 participants attended the social hour (40 of them were students, 18 of them were others).

Groups were formed based on the free choice of participants and each group consisted of 6 to 13 members. Participants were not just students but included researchers and engineers who gave invaluable advice by looking back their schooldays, talked about their efforts to keep the balance between the work and the private life and about how they built up their skills.

Activity reports of each group are outlined below.

i. **Group A**

In group A, the subjects “skills that should be acquired during schooldays with a scope of 10 years,” and “what to do now for the future” was discussed.

Mr. Ando, the facilitator, pointed out the deficiencies of the students for the success in the society. The point was that most students were incompetent and poor for combining wide range of experiences. He arranged the task for the training of the convergence, the divergence and the systematization from various keywords. That task was to list up the word conceived from the word “skill,” and to organize them.

Through the task, participants realized that it is difficult to get the competence, and that there are something that is specific to students’ insecure feelings behind it. Mr. Ando gave them the advice on how to solve the problem that comes up from the inexperience and how to get the necessary competence. “Do whatever actively, and find the most relevant conceptual frame in your work. The repetition of this exercise will enhance your coping skills for various situations.” “Whether or not you could succeed, it is important to make use of your past experience with the review process and the feedback.”

After the discussion, participants came to the conclusion that having a bash at anything is important and necessary skills can be achieved and acquired by repeating the feedback of the result.

ii. **Group B**

In group B, the subject of “Career planning for ourselves,” was discussed through the group work.

The session started by recognizing what is favored and what is interesting. So, participants tried to write out several interesting things and favorite things, and mapped them on the desk. Through the work, facilitator Mr. Iijima provided such clues as follows. “Knowing how you are while you are doing your favorite things is important.” “It is necessary to get it into your mind.”

Then, participants compared their dreams when they were children and presented them one by one. There was a partial connection to the human tastes. They recognized requirements for their work by identifying what they are yearning.

Finally, they obtained the advice from Mr. Iijima that it is the most effective to successfully capture their dream, and participants could decide what to do. It was the result of the workshop for group B. Some of the participants said “I want to
work in the NPO that is engaged in the ecology and the recycle,” “I’ll check the company that provides the job that matches to what I want to do.”

iii. Group C

In group C, the subject of “Building the career as a female researcher,” was discussed especially on the working conditions for women.

First, they talked about the current real situation of the Japanese society. The traditional culture that was supporting the hierarchical society by men still remains in the Japanese society, though the situation is changing. But in comparison to the situation of other developed countries, it could be said that Japanese society is not making a good use of women resources.

Based on the current situation, they discussed about the recruitment of women and the working condition of women. Well-developed system such as the flexible time system and the maternity leave for women are becoming common in academic and research institutions and companies. On the other hand, there is a problem in many companies that the office atmosphere and the situation are not good enough to use that system.

The discussion went further into the problem of postdoctoral female students that is still the problem for the researcher by taking an example of the career of Ms. Takano, the facilitator. The social consciousness for the gender issues was discussed. After acquiring the Ph.D., the career path for students are frequently to become the PD (postdoctoral). However, the social security and the average income for PDs are not sufficiently enough now.

When female researchers consider about their employment, it is important to make a comparison where to get the job in the industry-government-academia complex.

iv. Group D

In group D, the subject of “Thinking about the future career during schooldays,” was discussed based on the considerations on the position of the researcher in industry, the skills required to the researcher, advantages and disadvantages to go to the doctor's course, and the ability necessary for the industry researcher.

First, the participants enumerated what kinds of skill are necessary for the researcher, by applying the KJ method, where the cards were classified into 3 groups as follows. (i) to train and acquire the “ability to find the problem and to analyze” and “conceptualizing power”; (ii) to get the “ability to gather information”; (iii) to consider the “curiosity” and “to maintain the motivation.”

Second, various opinions were proposed about advantages and disadvantages to go to the doctor's course. They were “it is possible to conduct what I want to do,” “the expertise is acquired,” and “it is possible to have a tough mentally.” On the other hand, there were such disadvantages as to the difficulty for finding jobs and the age when one gets the degree.

The ability necessary for the industry researcher included “the business sense”, “the sense of modesty,” “the persuasive power,” and “the human network.” As a conclusion, it was realized that having a good communication skill and the research competency is important for the industry researcher.

v. Group E

In group E, the subject of “the difference of the research activity during the schooldays and after getting jobs,” and the difference between the university and the industry was discussed. The facilitator Mr. Harada gave the members an advice to find the employment and to keep on the school life from his own experience.

The session started by writing differences between the university and the industry. In the industry, there is no budget that the individual workers can manage for their own purpose and the budget is given to the team on business purposes.

Next, they discussed on what types of people is expected by the university and the industry. The person who is suitable for the university is the one “who can conduct the self management”, “who are single-minded”, and “who has a strong inquiring mind”. On the other hand, the people suitable to the industry are as follows: “those who like the team work,” “those who want to do various things” and “those who want to send off the product to the consumer”.

Necessary points that should be acquired at the university s are “the wide interpersonal network” and “the self-organized skill”. What are requested in industry are “the fundamental knowledge” and “the communication skill.” Moreover, both the university and the industry are expecting “the abundance of the experience” and “the English language skill.”

vi. Group F

In group F, the subject of “Skills required in foreign companies,” was discussed. The participant listed up uncertain issues about the work in foreign companies, and talked about the issues while the facilitator Ms. Yasuda was answering to the questions.

The main questions were about the autonomy, the specialty, and the English language skill. After the discussion, following three points were confirmed. First of all, it was important to take the leading role in the work. It was also important in foreign companies compared to Japanese industry to acquire one’s own core competence. The English language skill is naturally important in foreign companies as a lot of business mails and conversations are exchanged in English. On the other hand it is also true that we can acquire and improve those skills after joining the company. The most important point will be having basic fundamental skills to communicate effectively.

However, these points are necessary not only for foreign companies but also for the Japanese industry. Therefore, it became a conclusion that it is important to improve the self ability.

vii. Group G

In group G, the subject of “Career change and skill development,” was mainly discussed.

Participants discussed about the differences in the promotion style between Japanese companies and the American companies and the differences between the venture company and a general industry. Then, they talked about the skill improvement in industry and the requirements. The conclusion was that “the interpersonal relationship” and “the balanced T-shaped view” are important to keep in mind to work in the industry.
The skill improvement and the career change were discussed by group members as a theme proposed by the facilitator, Ms. Yano. As a result of the discussion, they obtained the common understanding that the career change is a skill improvement plan along with the own growth. However, it is necessary to clarify the needs when aiming at the career progress because the needs and the timing become more important at the career change.

IV. QUESTIONNAIRE

After completed the workshop, participants answered to the questionnaire. Results are described as follows.

i. Participants

The response was obtained from 41 participants for the questionnaire. Among 41 respondents, students were 33, and the general people was 8. In 33 student respondents, there were 8 IEEE members and 2 JSKE members, and 23 people were not the admission to any of the academic society. Their school years were recorded in the figure below.

And, there were 4 IEEE members (3 were within 10 years after the graduation of the undergraduate course) and 1 JSKE member was included in 8 general respondents.

ii. Evaluation of the workshop

Respondents evaluated the content of the workshop, its utility, and length of time respectively on the five point scales and the reason was written as a free description form.

(1) Total:
   excellent, good, average, not very good, bad.
(2) Usefulness:
   very useful, useful, average, not very useful, usefulness.
(3) Length of time:
   very adequate, adequate, moderate, rather long, long.

The evaluation of this workshop was generally positive as shown in the figures. These evaluations were obtained from the form that was divided into small groups and based on the theme of the workshop (from the opinions “it was felt that the rap session in a moderate number of people was very profitable,” and “it was a good chance to think about my future”). We could see that the participants could exchange opinions effectively so that such opinion as “I had a chance to get acquainted with other University students.” was obtained. Moreover, there were a lot of opinions with “moderate” as to the length of time.

iii. Plan for the future

Opinions concerning the future plan of the project were asked by the multiple answer form (free description was included).

(1) What Project would you expect in the future?:
   • The lecture (meeting where the speaker is… a corporate researcher or an academic researcher)
   • The discussion where you can discuss the theme freely
   • The student’s exchange
   • Course (the statistics, the presentation, and Others by free description)
   • Others (free description)

(2) What kind of disciplines are you interested?:
As a result, there were a lot of expectations for the project that will offer the place for the lecture meeting, the student exchange, and the discussion as shown in the figure below.

About the speaker of the lecture meeting, many people expected the researchers in industry (14 people) while 4 people expected the academic researcher. Some other opinions were there as to the theme such as; “what is good way to sell myself,” “the real story in industry”, and “what is kansei.”

In addition, the respondents selected “the information science (24 people)” as the most interesting field, followed by “the psychology (16 people),” “the systems engineering (15 people),” and “the management (14 people).”

V. FUTURE PROSPECTS

This workshop received quite a good evaluation as the result of the questionnaire shows. Additionally, we had impressions such as “it was what I wanted to do” and “it was significant and happy” from participants. We want to conduct a similar project in the future, and use that opportunity for the communication with students in different universities.

The 2nd workshop is scheduled in the autumn of 2009.

ACKNOWLEDGMENT

Many people gave us their great support for us to hold this workshop. This report was made based on the cooperation of many people including Mr. Teruhiko UMATANI of Tokyo University of Science, Mr. Naoki KITAHARA and Mr. Yoshihisa MIKAMI of Tokyo Denki University, Mr. Hiroo INAMURA of Chuo University, Mr. Kei MASAKI of Kogakuin University, and Mr. Takahiro YOKOI of University of Tsukuba. I would like to use this space to express my sincere thanks for their support.