Report

The 4th Career Development Workshop for Young Students and Professionals

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1. Introduction

"The 4th Career Development Workshop for Young Students and Professionals" was held in Tokyo Denki University (Kanda Campus) on October 23, 2010. This workshop was mainly organized by IEEE Tokyo GOLD Affinity Group and IEEE Japan Council Women in Engineering Affinity Group, and was co-organized by Tokyo Denki University Student Branch, Keio University Student Branch, Tokyo University of Science Student Branch, Yokohama National University Student Branch, Meiji University Student Branch, and Waseda University Student Branch.

2. About the Workshop

2.1. Objective

This workshop aimed to urge the rethinking to our own career and the skill for the young researchers of the undergraduate students, master's course students, and the doctor's course students in this workshop. It provides young researchers a good chance to discuss themes such as "What should the Engineer's way be in the future?" and "What is requested after joining a company? ", which can help the participant to prepare to become active in the society in the future.

2.2. Activities

Seven researchers and engineers who are active in the industrial world and the research, the educational institution were invited as facilitators to progress this workshop. The participants are divided to eight groups: A~H. Each group has a facilitator and the participants discussed a theme which has been set by the facilitator. The task of the facilitator is to progress the discussion with their own experience and skill improvement. Moreover, one supporter was invited for each group from student branches to smooth the discussion as well as taking notes in the group.

2.3. Program

The program of this workshop is as follows.

Chairperson: Kohei Ohno (IEEE Tokyo GOLD Vice Chair, Tokyo University of Science)

12:30~13:00 Reception

13:00~13:10 Opening speech: Prof. Katsuhisa Furuta
(President of Tokyo Denki University)

13:10~14:10 Introduction of facilitator

14:10~14:20 Break

14:20~15:50 Group Discussion

15:50~15:55 Summarizing the discussion

15:55~16:45 Presentation from each group

16:45~16:55 Closing : Prof. Saiichi Takeuchi
(IEEE Tokyo Gold Advisor)

17:30~19:30 Social gathering

3. Discussions in the Workshop

There were 92 people participated the workshop. The participants included 76 students (24 IEEE student members, 52 non-members), 8 facilitators (4 IEEE members, 4 non-members) and other 8 people (4 IEEE members, 4 non-members) respectively. The discussion in each group is given as below.

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Group	Facilitator	Organization	Topic
A	Ms. Midori Onogi	NTT DoCoMo, Inc.	The way To develop good products and services
B	Mr. Kenichi Kurihara	Google Inc.	The difference of the research activities between as a student in a university and as an employment in a company
C	Mr. Hiroyuki Kondo	Bosch Corp.	What is the overarching point to design the career?
D	Mr. Hiroki Nakamura	Wholesale Industry	What are wide knowledge and ideas?
E	Ms. Akiko Hirao	Toshiba Corp.	What do we want to acquire in student days?
F	Ms. Kotoko Hirose	Hitachi Ltd.	What should we devote to in student days?
G	Mr. Eiji Yamashita	Tokyo Electric Power Company	Thing necessary to have as a member of society
H	Ms. Akiko Yamada	Fujitsu Laboratories Ltd.	What should be the engineer's way in the future?

3.1. Group A

For Group A, The discussion is themed as "The way to develop good products and services". They took an example from mobile industry and discussed the possibilities of next-generation service for mobile phone under the competitive service charge of mobile phones. In this group, a variety of opinions were brainstormed and classified. The opinions to achieve a better service are featured as "difficult to distinguish the software side and hardware side of opinions suggested", "The Japanese 'Galapagos Mobile' has been derided, however the current phone users are not satisfied", "Over 90 percent of comments about the mobile phone service have not been provided by mobile phone companies". Almost everybody thinks it is very difficult to categorize the opinions. Moreover, it is also difficult to convey the opinion and make other people understand. Finally, based on the theme "the way to develop good products and services", the conclusion was given: the processes of "giving proposal positively", "The opinion needs to be categorized over mutual understanding", are required at least.

3.2. Group B

Group B has discussed "The difference of the research activities between students in schools and employees in companies ". First, students were free to ask questions to Mr. Kurihara. The questions are summed up: (1) Methods of choosing topics of research, (2) Methods of sharing resources, (3) Methods of Instructing juniors, (4) Relationship with other companies or laboratories. In (1), if a research topic is under the research area of a university laboratory, then any research topics will do just fine. On the other hand, in the industry, it is necessary to fulfill two points: the impact and the contribution level to society。 In (2), the researchers are usually carried out at the discretion of the individual at the university. For example, there are some cases of asking a junior to solve the same problem that a senior has already solved before. On the other hand, in the industry the problems solved and new thought of algorithms are shared by everyone to ensure efficiency in the research. In (3), there is no evaluation item to the guidance of the junior, though the evaluation to the research of the individual exists at the university. Therefore, the problem such as (2) obstruction to the intellectual growth of the junior student is possibly occurred. On the other hand, the guidance to the junior is also one kind of the evaluation criterion in the enterprise, so the guidance level is guaranteed to a certain degree. In (4), the students at the university can freely visit the enterprise through the internship and the company tour without any conflict of interest because they don't belong to any

enterprise. On the other hand, it is difficult to visit other enterprises when one works in a different company.

3.3. Group C

Group C's theme is "what are the important points of designing a successful career", Mr. Kondo from Bosh gave a presentation regarding this theme. The discussion itself is as follow. First everybody wrote down the important points for career design. Then, based on different points they wrote, the idea were divided into 7 groups such as "vision" group and "action" group. Similarly, the idea on social background were divided again according to "Competition", "Anxiety", "Performance-based reviews", so everybody knows clearly what they value. Group C have drawn a conclusion that in a competitive environment, it is important to have a clear vision for future. The facilitator gave everyone in group C two suggestions, "Find and create you own job", "Always think about career development" as an end to this successful discussion.

3.4. Group D

Group D discussed on the subject of extensive knowledge. In considering this theme, "how to avoid becoming a person limited to technology knowledge, but becoming a person of wide understanding of various fields of knowledge" was discussed. Specifically, the kinds of person who pursuit ultimate quality without any consideration of cost permanence balance was taken as an example to discuss. First, "Why were they taking such kind of action", answers like "Challenging is fun itself", "Money is not the only purpose", "Craftsmanship" were given. Then, the question "Why a person could end up like this?" was suggested. Answers like "This kind of person is not interested in social activities", "Ask for

complete confidence and pride," "don't know the outside world" were some opinions. Finally, "how to avoid being like this?" was asked. "Let's try to go abroad," "Participating in different events". To reach out to new fields seems to be the solution.

3.5. Group E

In Group E, "What do we want to acquire in student days?" was the theme discussed. Specifically, this discussion was divided into two sections. In the first half, what kind of people wanted by the industry was discussed. And in the second half necessary actions as a student to fulfill these demands were discussed. In the first half, opinions like "Individuals with the power to appeal to the public expression of new technologies," "People who have the ability to communicate," "Rich in imagination" were given. Expertise is a must, and in addition, industry wants people more of human nature with power of expression and imagination. In the second half, the discussion focused on how to fulfill the three main demands which were discussed in the first half of the discussion. In the end, "To improve one's power of expression can be practised by presenting their researches in conference ", "For communication skills, participating in events by companies, as well as exchanging with other universities' students will help", "For the imagination, do some form of training, try new ideas" were the answers the students gave. Other opinions "improve English skills which can be used in foreign countries", "to acquire a broad range of knowledge outside one's own expertise" have also appeared, efforts would be important to polish the whole humanity is also added as a conclusion.

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Fig. 1 Opening speech by Prof. Katsuhisa Furuta

Fig. 2 Group Discussion

Fig. 3 Results presentation

3.6. Group F

After started working in a company, it is important to act voluntarily to study by oneself as it is difficult to take leave and there is no one pushing you as in the school. Traveling to foreign countries and going to international conferences are given as some useful experiences as a university student. Students who do this can get the broader knowledge and vision about society,

which will help when they consider their careers. Also, when going abroad to study or to attend conference, it is also important that one makes the best of the opportunities that come up. Even some unexpected happenings will lead to a very good experience. Also from the academic aspect, there are not many chances that you can go asking questions to anybody. But in student days, students are free and encouraged to do that, as this is a privilege that only students have. In the end, more than anything, it is important to act spontaneously was the conclusion.

3.7. Group G

Group G discussed about "What is important for working people". First, they discussed about the difference between working people and students, and believed that working people are able to balance work and private life much better that students. Also, Mr. Yamashita made it clear that "able to do work" is an ability that everyone has. After that, students discussed about their anxiety of finding a job, and talked about what the abilities are required by the Japanese society. Motivation, physical strength, responsible power, English proficiency and technical knowledge were believed to be needed. And it is also understood that most important abilities are to be developed after one started working in a company, but what they can do now as students is to learn how to learn and the way of defining and solving problems with experiments and researches in the university life.

3.8. Group H

In Group H, "Ideal engineers of the future?" was the theme discussed. First, the group considered that "image of engineers of the future" and opinions like "not only Specialist but Generalist" "engineers can actually make things," "cooperate

with others" were suggested. Then facilitator Ms. Yamada proposed to divide the discussion group into two groups, the first group discussed about " what engineers do?" and the other group discussed "ideal engineers of the future" . Group 1 described nowadays engineers are the people who have the ability to "realize dream" with their expertise. Group 2 described the future engineers should be the ones who are providing the technology as a solution anywhere. The two groups came to a conclusion that future engineers should : "have firm knowledge", "free exchange of knowledge from different disciplines", "seize the current needs", "know the trends" "visionary", "like to moving forward aggressively". Group H concluded these as the five elements that future engineers should have.

4.　Questionnaire

The participants are invited to fill a survey after the discussion. The results of the survey are shown below.

4.1.　About the participants

The questionnaire consisted of 79 people (73 students, 6 non-student). Backgrounds of the 73 student participants are described in the figure below.
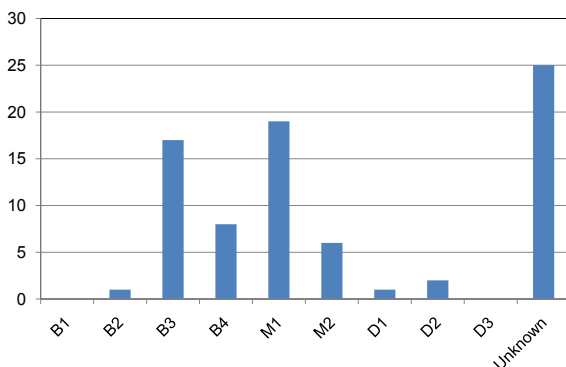
4.2.　Opinions to this workshop

About the content and usefulness, and the length of the workshop,　the participants evaluated the workshop with a five-level rating:

(1) Contents: excellent, good, normal, fair, poor.

(2) Usefulness: very helpful, useful, normal, useless.

(3) Length of time: short, slightly short, moderately long, slightly longer

As shown in the figure, the evaluation of this workshop on the planning, content, usefulness both felt that it was good. As a concrete opinion, "It was good to discussed something which is not related to research", "It is helpful to hear from working women", "I could learn the way to handle HR interviews", "I learned the importance of discussions "are given as feedbacks. We believe this workshop contributed to raising awareness of many people. In particular, "I could hear people talking about different ideas, such as students and working people" is particularly appreciated by many students.　There are many other opinions, and say it was very helpful to havea place for students and working people to discuss. Also, a number of people expressed that the length of time is "a little short," "moderate," which suggested that it had substantial content of the workshop and it was also the opinion of the majority.

Fig.4: School year of student participants

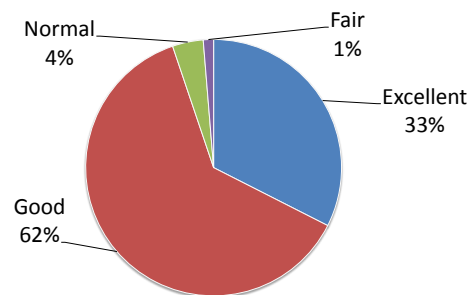(B: Bachelor; M: Master; D: Doctor)
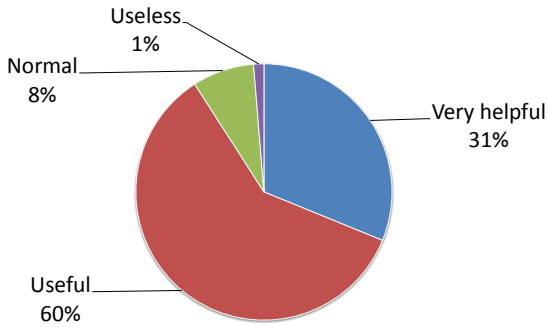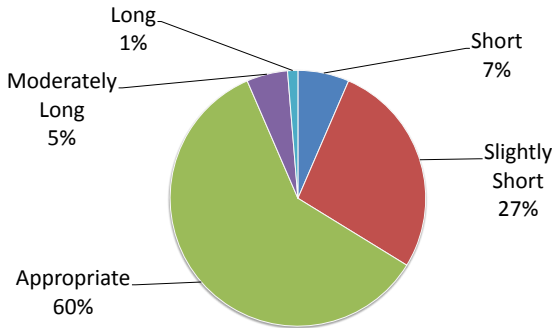

Fig. 5 Contents

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Fig. 6 Usefulness

Fig. 7 Length of time

4.3. Expectation for the future

For future workshops, what students want to participate was asked.

The choices are as follows.

(1) Future expect:

- Lecture (speaker corporate researchers, academic researchers)

- Discussion (free description of preferred themes)

- Communication between students

- Course (statistics, presentations, and more free description)

・Others (free description)

(2) areas of interest: information, communication, electricity, electronics, materials, equipment, systems, semiconductor, of science, economics, management, business, politics, society, education, medicine, physiology

As shown in the figure below, discussion and hands-on practical courses and lectures were expected in the future. Students want The Conference speakers to be someone from the industries, and interested in the field of IT, quite a few people were interested in economic topics.
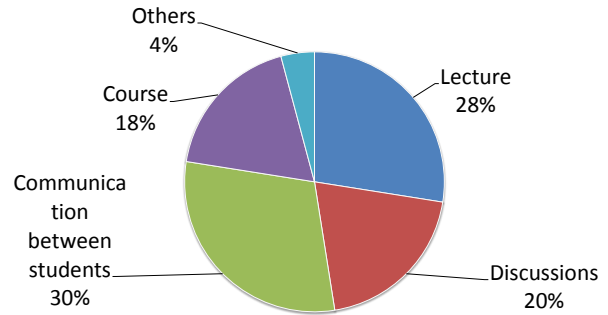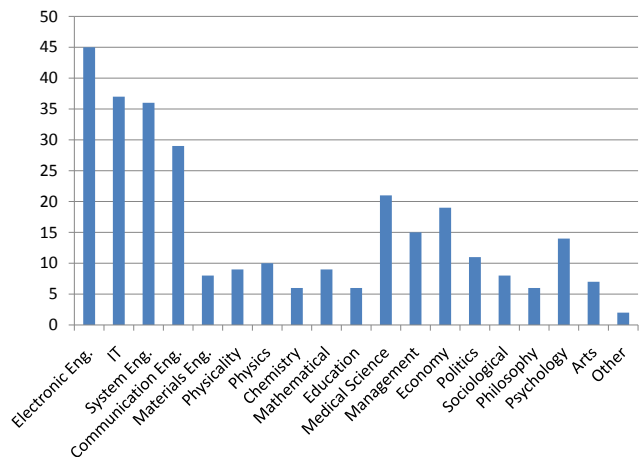

Fig. 8 Future Expect

Fig. 9 Interested Area

5. Expectation for the future

We have received a very good feedback from all Participants as the last time and the one before last time, for this we would continue holding this workshop in Jun. 2011 for the fifth time.

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Kurihara, Mr. Kondo, Mr. Nakamura, Ms. Hirao, Ms. Hirose, Mr. Yamashita and Ms. Yamada. Also supports of different groups, including Mr. Nabatame, Mr. Akutsu, Mr. Yoshihisa, Mr. Ikeda, Mr. Yamashina, Mr. Futatsugi and Mr. Uchiyama. I would like to express my appreciation to all of the people who have supported this workshop here.