

The 10th Career Development Workshop for Young Students and Professionals

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1. Introduction

On November 30th, 2013, the 10th Career Development Workshop (CDWS) for Young Students and Professionals was held at Kanamachi campus of Tokyo University of Science. This workshop was organized by IEEE Tokyo GOLD (Graduate of Last Decade) Affinity Group, Japan Council WIE (Woman in Engineering) Affinity Group and 9 Student Branches (Tokyo University of Science, Chuo University, Keio University, Meiji University, Tokyo Institute of Technology, Tokyo Denki University, Tokyo University of Agriculture and Technology, The University of Tokyo, and Waseda University).

2. Overview

2.1 Object

This workshop focused on undergraduate students, and graduate students both in master's course and doctor's course expected to play a big role in society in the near future. The purpose of this workshop is to discuss career development and think about their future plan through the group discussion.

2.2 Content

We invited six facilitators to lead discussions from research institutions and academic institutions. We formed six groups (A-F), including one facilitator for each, and discussed a specific themes shown in the list below. The themes were settled based on the facilitators' ideas. Supporting student staffs also joined each group to encourage the

discussion and record it. At the end of the program, each group presented the summary of the discussion and conclusion.

2.3 Program

Chairperson: Takehiro Sato

(IEEE Keio University Student Branch)

Host: Mamiko Inamori

(IEEE Japan Council WIE)

12:30 – 13:00 Reception

13:00 – 13:05 Opening greeting

Noboru Katayama

(IEEE Tokyo University of Science counselor)

13:05 – 13:40 Introduction of facilitators

13:40 – 13:45 Break

13:45 – 15:15 Discuss in each group

15:15 – 15:25 Summarizing the Discussion

15:25 – 15:30 Break

15:30 – 16:20 Presentation from each group

16:20 – 16:30 Closing greeting

Emi Yano

(IEEE Japan Council WIE)

17:00 – 19:00 sociable gathering

3. Workshop

The number of participants in the workshop including staffs was .

• Students	37 (incl. 28 IEEE members)
• Others	3 (incl. 3 IEEE members)
• Facilitators	6

Group	Facilitators	Theme
A	Hiroko Nagashima (NEC)	What is it to make software?
B	Takehumi Yamada (Toyota Industries Corporation)	What is required for new employees of companies?
C	Yongqing Sun (NTT Laboratory)	What are fundamental research skills required for being a good researcher in a company?
D	Hiroaki Miyasaka (NHK Science & Technology Research Laboratories)	What is required of engineers in the future
E	Kazuki Ikeda (Hitachi)	Research and development in the enterprise
F	Yuki Koike (Ericsson Japan)	What is the necessary skill in foreign corporations

■Group A

In group A, we discussed “What is it to make software?” including facilitators, Ms. Nagashima.

First, we thought about "What is an important thing for making software?", and shared each opinion in brainstorming. As a result, The opinions that considering the development side, such as "development costs", "ease of development", the opinions that considering the user, such as "to suggest a function of the user wants", "Understanding the needs of users", and the opinions about the software itself, such as "implementation of a simple function", "design of the User Interface that is easy to understand, easy to use" were referred.

Next, based on these opinions, we discussed which is most important. The opinion that it was important to make software with a high user experience such as functions necessary and well for the user and User Interface that saw easily was referred because software is intended to streamline the work of the user. Moreover, the opinion of having to have a wide field of view and to advance development in the team smoothly was referred to the developer to make such software.

From the results of the discussion, we have thought to stand in the position of both user and

developer is important to software development. Finally, we concluded that “What is it to make software?” is “The developer has a wide field of view, and think about both of a development team working together and the user”

(Group A support: Tatsuya Machida (Meiji University))

■Group B

Group B’s discussion topic was “What is required for new employees of companies?” We had the discussion together with Yamada Takefumi from Toyota Industries Corporation, who was the facilitator for the discussion. At the beginning of the discussion, skills and first impressions were listed as what the new employees should brush up, and we agreed to consider these two things as the keys of the discussion.

First, we divided the skills into four factors: attitude for learning, capacity for doing paperwork, common sense and personality. Then, we tried to seek the way to improve these four, and finally proposed that new employees should act on the following actions on a daily basis: being honest, managing time, reading newspapers and getting involved with various people respectively.

Secondly, we discussed the first impression, focusing on external and internal aspects. As for

external aspects, we proposed that freshmen should be careful about their appearance such as hairstyle, clothing and shoes. And as for internal aspects, we insisted that goodness and skills to keep conversations with a stranger are important because these things have strong influence to impressions from business people.

In conclusion, we analyzed what is needed for new employees of companies, focusing on their skills and first impressions, and proposed what they should be careful about when improving them.

(Group B support: Yojiro Ito
(Tokyo Institute of Technology))

■Group C

The topic of the discussion held in group C (nine members including our facilitator, Ms. Sun) was “What are fundamental research skills required for being a good researcher in a company?”.

We began our discussion by listing the differences and similarities between research in a university laboratory and in a company. We pointed out that research in a company is usually expected to be rather practical and efficient so that the company can use it to improve the business (though the fundamental research is also considered important for most companies, the amount of the fundamental research is relatively small). On the other hand, research in a university laboratory is usually more fundamental, and not always expected to be practical immediately. We also found that these differences reflect their research outputs where most industrial researchers apply for a patent to protect their own inventions while academic researchers rather publish their works in academic conferences or journals to discuss with others. In addition, it may be another characteristic difference that the collaborative research tends to occur more often between industries or industry and university than

between universities.

At the end of our discussion, we concluded that there is no “unique” requirement for being a good researcher in a company. Rather than that, a wide variety of skills related with industrial research activities mentioned in these discussions are essential as if a human body is composed of many different parts such as legs, arms and so on.

(Group C support: Shunpei Sano
(Tokyo University))

■Group D

In group D, we had discussion about the theme, “What is required of engineers in the future” with 8 members including our facilitator, Mr. Miyasaka.

First of all, we talked about what an ideal engineer is, various opinions were raised. Then, based on the opinions, we came to the conclusion that abilities to accommodate to cope when a new technology is introduced, to make effective use of a lot of information, and to respond to changes.

In addition, considering the specific differences of the past and current research environment, we discussed the theme what capacities are required in order to correspond to the differences. Changes in the environment are the following three. First, because amount of information has increased, it is difficult to process information. As a countermeasure, the opinion that it is necessary to sift through information were raised. Second, because of the development sharing information tools, group development has become easier. Moreover, because of globalization, co-development of the people of foreign countries has increased. As a countermeasure, cultural understanding and language skills are necessary to proceed efficiently work.

I feel that it became a discussion very fruitful for

us, who aims to researchers and engineers.

(Group D support: Masahiro Wakabayashi
(Waseda University))

■Group E

The theme of Group E was "research and development in the enterprise". First, we reminisced that the starting point and the reason why I want to research and develop in ourself life. Then, we marshaled our experiences, interests and studies. After that we delivered the vision of my future and what I want to do. Each student talked about the vision. Finally, we planned our future and how do I do to make a career. In this discussion, I thought what I want to work in the company and how do I get the motivation to work and investigate. That is one of the examples in the discussion. I hope you find it informative. Mr. Ikeda, our facilitator, is involved in the research and development of "hologram memory" for them company. And what he wants to do in the future is "What do we do for our society and developing technology." And we discussed these topics as general overview.

We thought that you want to do in our life and those planes that we want to do in the future. Our facilitator would express the term "Research and development in the enterprise" from his concept of values. It was very impressive for us. We argued the work. We did not conclude the discussion. Because there is no answer in this topic. We have to make a effort for working of each aim. In the group discussion, we were able to talk realistic what we want to do in the company.

(Group E support: Azumi Kano
(ChuoUniversity))

■Group F

In Group F, we discussed about the theme "What is the necessary skill in foreign corporations" with Mr. Ogawa from Ericsson Japan K. K.

At first, we defined "What is the necessary skill in foreign corporation" is "What is the necessary skill in global corporations". Because we considered the people with "the necessary skill in global corporations" also have "the necessary skill in foreign corporations". We throw in ideas and categorize the ideas into three types, "the necessary skill in domestic corporations", "the necessary skill in foreign corporations" and "the necessary skill in global corporations".

In consequently, "the necessary skill in global corporations" is communication ability (command of English and bargaining ability etc.), high work efficiency and regular life style. These skills are foundation, "the necessary skill in domestic corporations" and "the necessary skill in foreign corporations" on it. "the necessary skill in foreign corporations" need humor and individualism, "the necessary skill in domestic corporations" need virtue and totalism. And, we concluded that "the necessary skill in domestic corporations" includes the skills of both.

(Group F support: Ryoko Ohama
(Tokyo University of Science))

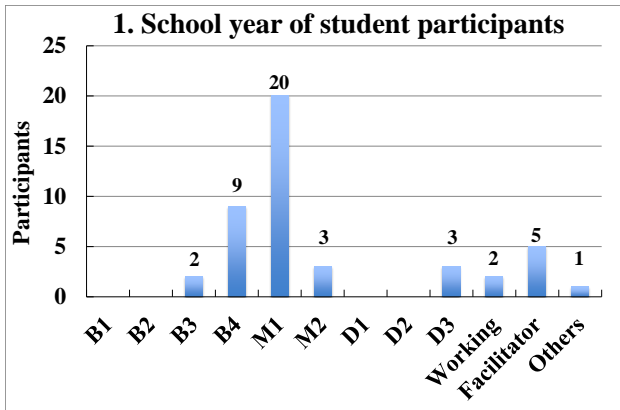
4. Questionnaire

After the workshop, we asked participants to answer the questionnaire.

4.1 Respondents

83% of participants (45 people) answered for the questionnaire.

The organization of respondents is shown below.
(B: Bachelor; M: Master; D: Doctor)



4.2 About workshop

We sent out questionnaires to participants to evaluate this workshop about contents, usefulness and time length on a scale of one to five and write the reasons. The five scales for each question are below.

1. Contents: very good, good, average, poor, very poor
2. Usefulness: very useful, useful, average, useless, very useless
3. Time length: long, slightly long, appropriate, slightly short, short

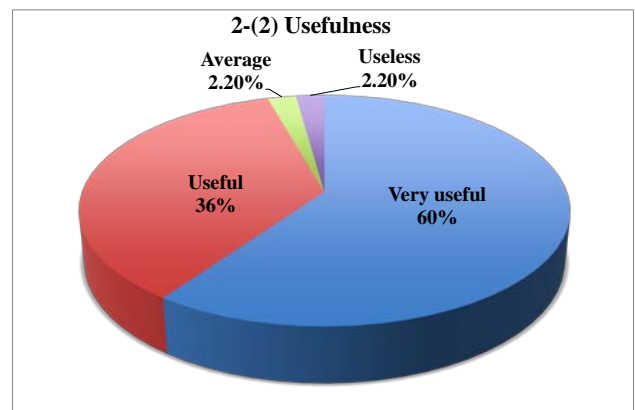
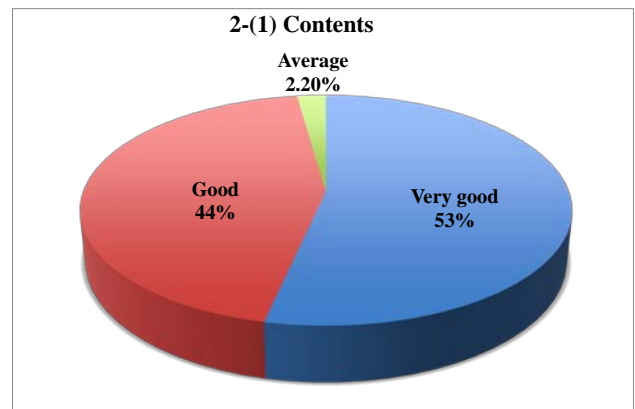
The results of each question are shown below.

We received favorable reviews from more than 90 % of people as well as the 9th CDWS. The specific reasons for the answer from students were:

- It was a good opportunity to learn the gap between students and people from companies about engineering.
- It was a nice opportunity to reconsider about my career and consider job searching.
- I learned the various things through the workshop. I would like to use this experience to advantage for job searching.
- It was valuable to motivate myself for job searching.
- I learned the specific points that recruiting staffs want.

- It was precious because we don't have chances to discuss.
 - It was fun that I heard many opinions and talk with people from other universities.
- And also the reasons from other participants were:
- There were various themes. I want to discuss other themes and was interested in them.
 - It was nice to have a discussion with people from companies and students.
 - I listened to various opinions from students. It was a good opportunity to hear student's opinions and to enjoy amicable relations between people from companies and students by IEEE activity.
 - It was very beneficial that we could see the discussion objectively.

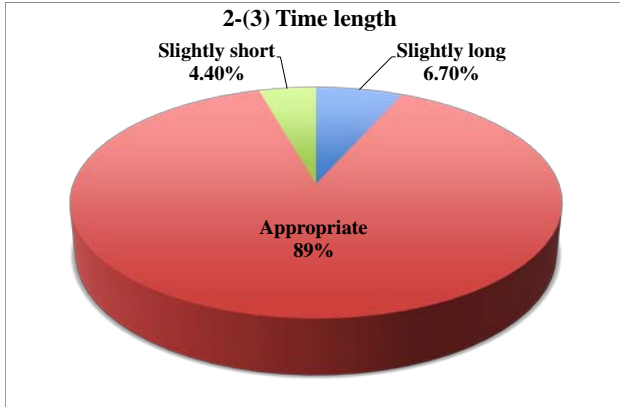
The supporting staff and young men led our discussion forward.



About 2-(3) Time length, "Appropriate" was 89% and there was no one who chose "too long" in the 10th CDWS. The reasons why participants chose

“Appropriate” were:

- We continued to discuss till the last. If we had more time, we might become diminished to discuss.
- We had the productive discussion because the time length is rightness.



The other requests written in a free space were:

- I have participated in CDWS every time. I want to do different things.
- After all these years, I got involved in this discussion. It was very nice because I heard student’s opinions.
- Some discussion themes have similar topics. The committee should manage discussion themes.

4.3 About next workshop

We also asked what kind of events and fields hereafter participants expect for our congress to have with multi-choices on the questionnaire. The choices are

(1) Events

- Lecture meeting
- Practical course
- Contest
- Company tour
- Informal networking
- Others

(2) Fields

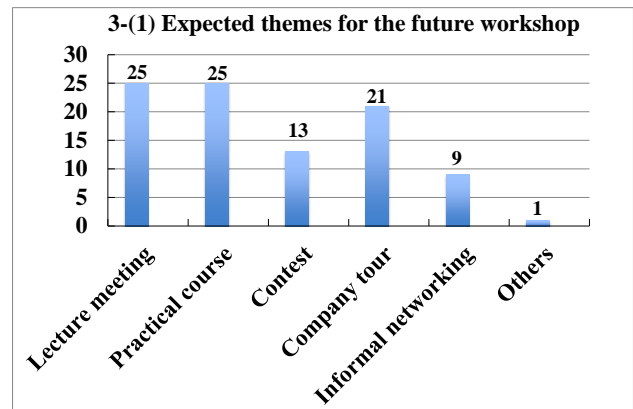
Electrical Engineering / Electronic Engineering / IT / System Engineering / Communications / Material

/Physicality / Physics / Chemistry /Mathematics / Education / Medical / Management /Economics / Politics / Social Science / Philosophy /Psychology / Arts / Others

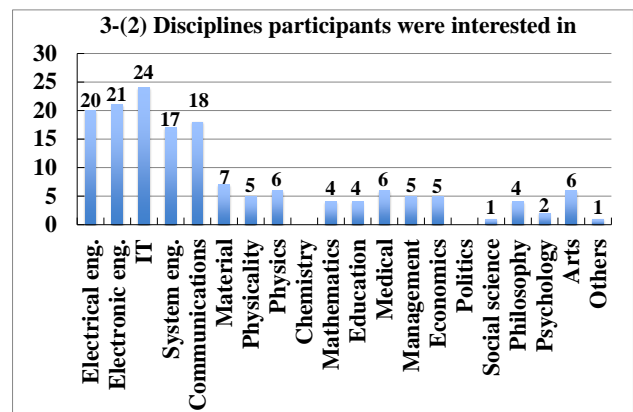
Results for each question are shown in below. About 3-(1) the events that they expect, the rates “Lecture meeting” & “Practical course” were highest 25, and “Company tour”, “Contest” and “Informal networking”, “Others” were followed in order. They wanted to be a researcher for companies or a teacher for engineering and discussing the lecture.

We have a company tour once a year. It has held by IEEE Tokyo GOLD.

In affinity Group and Student Branches, we would like to announce this event widely to get more members.



About 3-(2) the fields they are interested in, they chose the engineering fields that IEEE relates more such as “IT”, “Electronic eng.,” “Electrical eng.” and “Communications”.



5. Summary

The 10th CDWS, which had discussion with 6 groups, also received a favorable review by participants. We would like to organize workshops with high quality, a lot of students for thinking about their future careers. And we invite young researchers to talk about their future and make the opportunity to discuss with students and workings. The next 11 th CDWS is scheduled in June 2014.

We appreciate to Ms. Nagashima, Mr. Yamada, Ms.Sun, Mr. Miyasaka, Mr. Ikeda and Mr. Koike who participated in this workshop as a facilitator.