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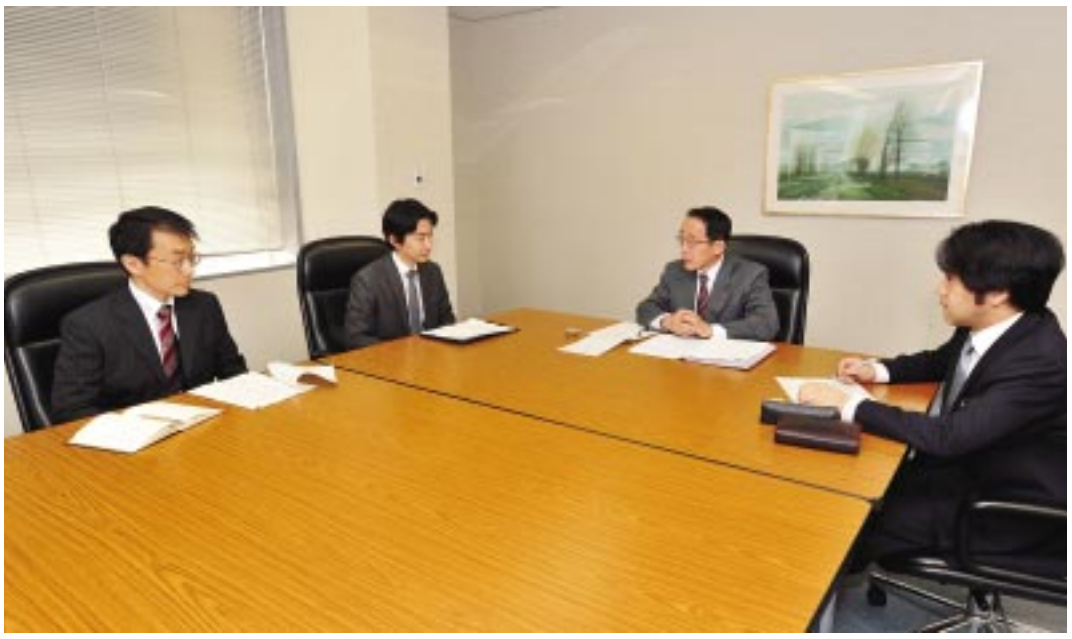
japan times forum on english education

English education for engineers needs new framework, methods



Common ground: Engineering managers and human resources officials at Japanese corporations get together recently for a Japan Times round-table discussion. They are (clockwise from right) Ryusuke Ito from Hitachi, Ltd., moderator Michihiro Hirai, a language education consultant, Yasuhisa Nakamura from Toyo Engineering Corp. and Toshiyuki Akimoto from Sekisui Medical Co., Ltd. YOSHIAKI MIURA

Engineering managers and human resources officers at Japanese enterprises have shared the view that a coordinated, systematic approach by academia and industry is necessary to improve technical English education for young engineers in Japan.

They reached the conclusion while noting that the general lack of English communication skills among Japanese engineers is attributable mainly to the fact that they have received inadequate English training in speaking and writing, and to some extent listening. Opportunities for young Japanese engineers to use English are increasing and becoming more complex as Japanese companies internationalize their operations further. How to enhance their English skills is bound to be a crucial issue for maintaining Japan's international competitiveness in the years ahead.

Three officials from different manufacturing sectors were invited to speak at a recent round-table meeting organized by The Japan Times. They devoted their discussion, assisted by a moderator, to locating challenges for English language education for students at engineering-related faculties and finding measures to improve the situation. They went on to discuss how to encourage today's students to learn English seriously amid young people's closed mentality in exploring their careers.

The speakers were Ryusuke Ito from Hitachi, Ltd., Toshiyuki Akimoto from Sekisui Medical Co., Ltd., and Yasuhisa Nakamura from Toyo Engineering Corp. The moderator at the three-hour meeting was Michihiro Hirai, a language education consultant and a lecturer of technical English at Kanagawa University and Waseda University.

Their discussion follows.

Moderator: Could you talk about typical problems engineers at your companies are faced with in communicating with foreigners in English?

Yasuhisa Nakamura: Engineers should speak out more actively when dealing with non-Japanese. However, I find our employees' writing skills relatively reasonable. They can describe their problems fairly well in writing when given time, but they cannot communicate them effectively in spoken words.

Ryusuke Ito: Young engineers generally can communicate with foreigners when their counterparts have an interest in their topics, but the communication often breaks down where there is a conflict in interest or opinion, which requires debating or negotiation skills. Since they are not trained in these skills, they cannot keep up with the conversation.

Another cause of the communication problem would be a difference in mental framework, which has little to do with the language. Japanese people, especially engineers, have been generally inclined not to speak out in public unless they are sure of their thought for purposes of accuracy. They tend to think hard, perhaps too hard by Western standards, before giving any response, and this slowness, or worse, lack of response, often frustrates and even alienates the other party.

A simple phrase such as, "My general idea on this matter is like this," may help to facilitate debates in a productive and significant way. If it is absolutely necessary to make a comment on the spot, they might say, "I will confirm it and come back with more accurate information by day X."

Toshiyuki Akimoto: A misconception still remains among young Japanese engineers that they can do their jobs even if they are weak in verbal communication. This is apparently due to their self-confidence that their technical excellence might be a great help in business. And most students have not received systematic training in English writing at universities.

Moderator: What would be the skill level you consider required for technical and business communication in English?

Ito: What's essential is the ability to effectively communicate even when the other party is suspicious about his or her presentation or does not share the common understanding. This requires logical thinking and persuasive articulation based on Western rhetoric in the conduct of output-driven English skills such as speaking and writing.

Akimoto and Nakamura: We agree.

Moderator: Could you comment on the gaps between the actual English skills of engineers and the desired levels for them? Specifically, what kinds of skills must be improved quickly?

Ito: I find some young engineers significantly lacking listening skills. In addition, and more importantly, I see an acute gap in articulation and argumentation skills, which I have mentioned as required.

Akimoto: The biggest problem as I see it is the ability to discuss abstract issues such as processes of thinking and planning.

Nakamura: While our employees' English levels are relatively high, we see pressing need for improving active skills, namely speaking and writing.

Moderator: I'd like to share with you, if I may, some of the findings of my recent survey on the correlations between active skills and passive skills, namely reading and listening skills, based on the score data of the TOEIC test and a business English test.

In sum, the correlations are not very high, with the correlation coefficient being .66 for speaking and .69 for writing. I also found that the TOEIC scores of more than 840 are typically needed to reach the level (B2 of the CEFR [Common European Framework of Reference for Languages: Learning, Teaching, Assessment]) required for successful business communication, which points to a significant gap in active skills in the real business world.

Now, what do you think are the major causes for these gaps?

Ito: Obviously, most Japanese schools do not teach practical English, particularly speaking and writing. The basis is missing.

Akimoto: Japanese universities are not meeting the needs of the real world. Also, at the individual level, those who have a solid foundation in grammar turn out to have great potentials for growth in communication skills.

Nakamura: One of the root causes would be a lack of motivation. Most Japanese students do not realize that English communication skills are indispensable for their future career. A South Korean company that is a rival to us has a TOEIC score of 900 (990 is the highest score possible) as a minimum requirement for hiring university graduates.

Ito: As for middle-rank employees, it is those people who are in dire need of communication ability in English in actual business situations. The irony is that they find it hard to keep studying English as their daily work load is too heavy and cannot find time to do so.

Moderator: Do you think that there are problems with technical English education at advanced educational institutions?

Akimoto: Students should realize that they will not be able to find jobs even in smaller companies unless they are competent in English communication skills.

Nakamura: Whether they have English skills or not is changing from an opportunity factor to a threat, when they cannot speak English, in the international business world.

Ito: I agree. Asian economies like South Korea are increasing their presence in international business largely because they have plenty of highly motivated English-speaking employees. Meanwhile, Japanese companies' profiles in the international arena are becoming relatively much weaker because their employees' English communication skills are, generally speaking, very limited. I fear that this may affect Japan's development from now on at a time when other Asian countries are increasing their profiles in the international field.

Moderator: What do you think must be done to improve English language education for engineering students?

Nakamura: I hope that the academic world will make more efforts to improve the situation. What's needed is a seamless approach to English education from university to industry. The two worlds should work together to develop a common framework for engineering students, which should focus on solid communication skills rather than the veneer of internship programs.

Ito: Motivation for learning English must be stimulated from childhood by introducing, say, the eurhythmics education method from the cradle, and by focusing more on output-driven speaking and writing skills in English education at elementary and junior high schools, so that they can learn how fun it is to communicate in English.

In senior high school and university education, students should be given a chance to develop debating and negotiating skills in English, which are applicable to actual business situations, while being motivated to work in the international business world upon graduation.

Moderator: Naturally, universities should incorporate more substantial technical English programs. While a growing number of universities have started to do so, most universities are faced with numerous obstacles, one of the greatest being an absolute lack of qualified teachers.

Akimoto: Young people should be educated properly to acquire basic communication skills, using real business materials at universities. And if I may mention again the students' weak motivation, that might be related to the lack of proper nurturing in the family.

In the first place, they had few occasions to think about their roles in their family life. For example, here is a child who is having difficulty tying his or her shoelaces and the mother is watching. The mother becomes impatient and ties the laces for her child. Most students have not been urged to find their roles by themselves in their childhood. As a result, they cannot think about how to behave when they have entered the real business world. It looks as if most students were raised in bird cages.

Moderator: Japanese generally lack a sense of crisis because this is an island nation. Most students tend to believe their future is secured as long as they are employed by a major Japanese company, and close to its headquarters at that. They do not feel strong incentives for learning English. Some even stay away from English so as not to be posted overseas. Efforts must be made to help students break out of this backward frame of mind.

Ito: In a recent survey of young Japanese people about hobbies, the cell phone ranked high, to my surprise. Why can a cell phone be a hobby? This is just terrible.

Until some years ago, skiing, snowboarding, travel and motoring were very popular hobbies for young people, but today they have little interest in these hobbies. They appear to be less interested in adventurous things. According to the comments attached to the findings of this survey, they are interested only in what they see within a radius of 1.5 meters around themselves.

As I mentioned earlier, their English-learning motivation must be fostered from their childhood by teaching them the joy of studying English and the practical necessity of English. For instance, we could tell them that English proficiency will help them to expand their sphere of activities across borders and to engage in a work of a larger scale in collaboration with diverse kinds of people in the world.

Moderator: Referring back to the lack of qualified teachers of technical English, I would emphasize that the business and academic worlds need to work together to address this problem. Here is an idea.

Some companies have mature employees, though limited in number, with substantial experience in their specialties who also happen to be reasonably competent in English. As they get older, many of them become redundant since posts are limited. The idea is to set up a training scheme by which such people are registered as potential teachers and take appropriate courses in teaching technical English. Their employers support them financially while universities take care of the training. This is like killing two birds with one stone: alleviating the teacher shortage and creating job opportunities for senior engineers.

Ito: There is also a need to introduce, or re-introduce, a system of assessing the level of English education at universities and graduate schools. Like it or not, the number of doctorate holders has increased dramatically after such a number was designated as a measure of the educational quality of a university.

In this connection, the number of students with a high proficiency of English at universities who meet the actual requirements of industry could be a new gauge to assess the quality of education at universities. We also may need to introduce a new gauge that will also focus on efforts to foster internationally minded students.

Moderator: As I mentioned earlier, we first need to establish a common framework for users and educators of technical English similar to CEFR. Such a framework will allow industry and academia to share ideas and standards for developing and assessing technical English curricula, including measures for evaluating technical English skills. If companies introduce such common measures as part of their recruiting criteria, then engineering colleges will align their curricula with them, thus forming a favorable loop of efforts to improve the situation.

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Summary of Typical Candidate Abilities

CEF	ALTE Level	Description
C2	5 Very Advanced	Research has shown that typical candidates at this level can: ☎ use the telephone persuasively and effectively; 📖 understand all but the most specialised letters and documents; 👄 put points persuasively when dealing with clients, and speak effectively and at length in meetings; ✎ write most kinds of letters and reports and take dictation on non-routine matters.
C1	4 Advanced	Research has shown that typical candidates at this level can: ☎ use the telephone for most purposes; 📖 understand quickly most letters and documents, with some dictionary help; 👄 deal with clients effectively, handling matters outside their own field; ✎ write most letters and reports with few errors.
B2	3 Upper Intermediate	Research has shown that typical candidates at this level can: ☎ use the telephone with good understanding; 📖 understand most reports and non-routine letters, with dictionary help; 👄 deal with clients and resolve most problems in their own field; ✎ write more complex messages and non-routine factual letters, if work is checked.
B1	2 Lower Intermediate	Research has shown that typical candidates at this level can: ☎ use the telephone for routine messages (e.g.arrangements for a meeting); 📖 understand routine letters and information about familiar products or services; 👄 deal with clients on routine matters (e.g.taking orders) and engage in limited conversation (e.g.talking about personal interests); ✎ write factual messages and routine letters, if work is checked.
A2	1 Elementary	Research has shown that typical candidates at this level can: ☎ use the telephone for simple messages (e.g.My flight is late. I will arrive at ten o'clock); 📖 state and understand simple messages or instructions; 👄 deal with clients by asking and responding to simple questions (e.g. Where is the post office?); ✎ write simple messages and letters following a standard model.
A1	Beginner	Research has shown that typical candidates at this level may know some phrases.

NOTES: CEF stands for the Common European Framework of Reference for Languages, a guideline used to describe achievements of learners of foreign languages across Europe. ALTE stands for the Association of Language Testers in Europe, an association of institutions within Europe, which provide examinations and certification for language learners.
SOURCE: The Society for Testing English Proficiency Inc. (STEP). http://www.eiken.or.jp/bulats/gaiyo/kekka.html

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