

japan times forum on english education

Engineers must have English skills to succeed

With the continuing trend of economic interdependence prevailing on a global scale, Japan is increasingly interwoven with the rest of the world on many fronts. Overseas production of goods for Japanese companies has been steadily growing during the past few decades while the number of non-Japanese nationals working in Japan has reached nearly half a million, or close to 1 percent of the total workforce, as of October 2008.

Against this backdrop, it is becoming inevitable for Japanese researchers and engineers to communicate directly with non-Japanese people, not only their counterparts but also businesspeople, customers and even government officials. In reality, however, their communication ability in English, the de facto international language in business, is far from meeting demand. Despite the remarkable achievements in science and technology in recent years, highlighted by the granting of several Nobel Prizes and significant breakthroughs made in laser optics and iPS cells (induced pluripotent stem cells), Japanese researchers and engineers are considered by and large not competent enough in English communication skills.

In an attempt to identify real problems Japanese researchers and engineers are faced with in English communication, and hopefully to offer some hints to their solutions, The Japan Times brought together four noted figures engaged in English education for researchers and engineers.

They were Michihiro Hirai, a language education consultant and freelance translator as well as a lecturer of technical English at Kanagawa University and Waseda University; Masaharu Hiraga, a former adviser to Sanden Corporation; Laurence Anthony, a professor at the Faculty of Science and Engineering at Waseda University; and Atsuko Yamazaki, a professor at Shibaura Institute of Technology. Masafumi Otsuka, the CEO of MANABI Ltd., served as moderator.

Their discussions follow:

Moderator: Can you tell us how the recent economic changes have affected Japanese researchers and engineers who use English in their jobs?

Michihiro Hirai: I was with Hitachi from 1965 to 2002. During this time, I witnessed many changes in the roles of people being sent overseas. Back in the '70s and '80s, Japanese companies mostly exported their products, so it was mainly the service and support engineers who needed to communicate in English. This role drastically changed during the '90s, when companies started producing their products overseas. More and more Japanese engineers who worked in manufacturing were sent overseas to oversee the new production sites while the design and development departments still remained in Japan. But due to the burst in globalization, product design and development have begun to move overseas as well. Now, engineers have to talk directly to foreign customers, work closely with the sales and marketing people, and often times negotiate with people inside and outside the firm.

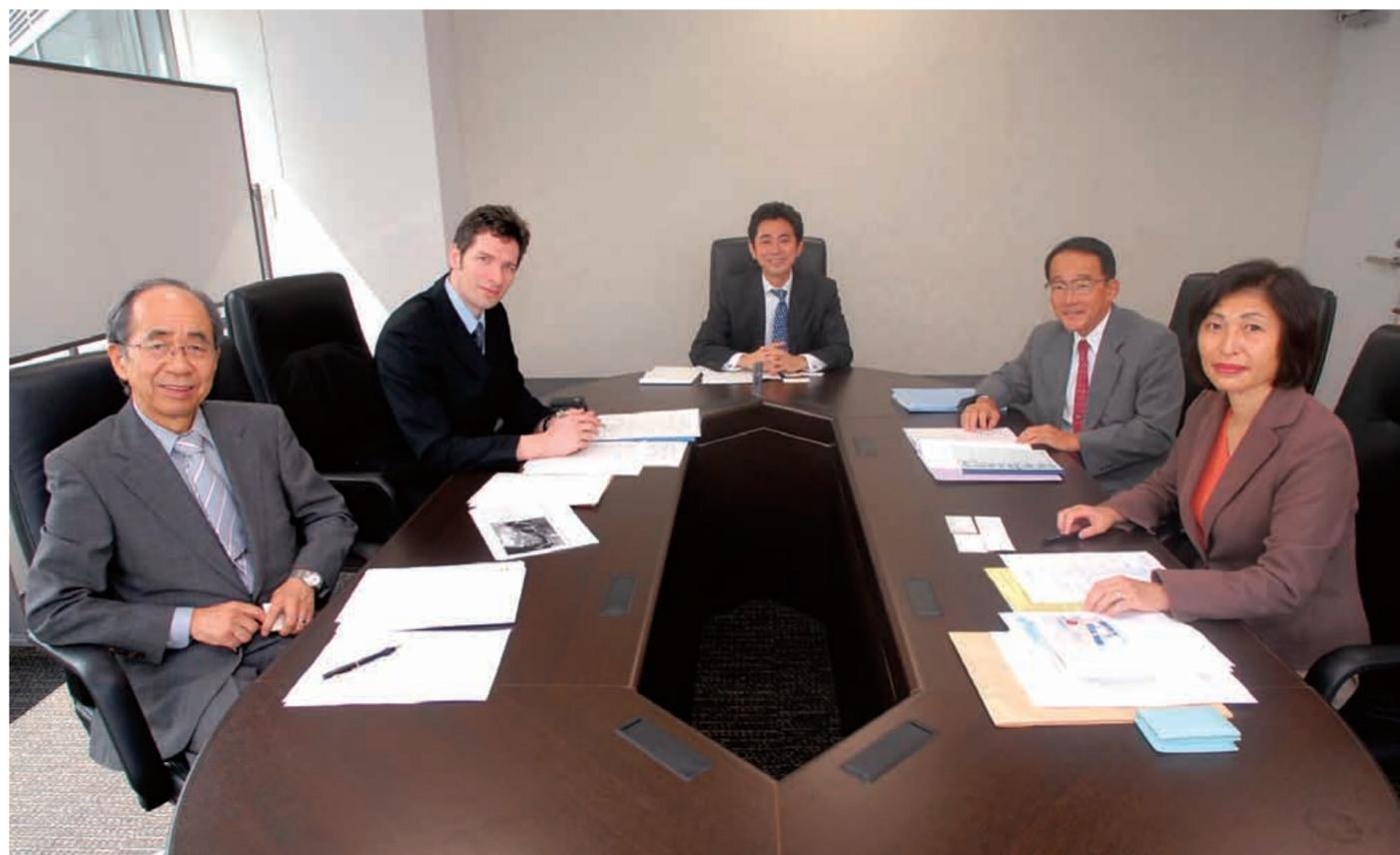
Atsuko Yamazaki: I visited factories operated by Japanese manufacturers in Southeast Asia and the United States and found exactly what Mr. Hirai just stated. The Japanese managers were

responsible for transferring a certain technology into a new production site and had to do everything by themselves from scratch. Considering the complexity of the work and the time constraint, there wasn't the option of hiring an interpreter. The role of Japanese engineers is drastically changing from solely engineering to managing, discussing and negotiating with various professionals.

'There is a huge gap in what corporations want and what the current education system provides. Current English education in Japan focuses too much on passive skills: reading and listening. But the demand in the real world is active skills: speaking and writing. I'm afraid this gap largely stems from the overdependence on the TOEIC test as the sole indicator of English skills both in industry and academia.'

Also, due to regulations in some developing countries, some countries require foreign companies to incorporate locally and hire local CEOs. Many group leaders at engineering sites are also non-Japanese. So there is a growing need for Japanese engineers living in Japan to communicate with non-Japanese workers abroad.

Masaharu Hiraga: In the past, the major R&D centers were in Japan, so



Expert panel: Professionals at the forefront of Japan's education of English to researchers and engineers get together recently for a Japan Times round-table discussion. They are (clockwise from left) Masaharu Hiraga, an ex-adviser to Sanden Corp.; Laurence Anthony, a professor at Waseda University; moderator Masafumi Otsuka, CEO of MANABI Ltd.; Michihiro Hirai, a language-education consultant; and Atsuko Yamazaki, a professor at the Shibaura Institute of Technology. YOSHIAKI MIURA

engineers directly went abroad to sell their core technologies to clients. But now R&D centers are scattered around the world in order to fulfill each market's needs. And now, non-Japanese engineers are at the forefront of dealing directly with clients. So Japanese engineers must communicate with these non-Japanese engineers. The interesting part is that the majority of the non-

nuances of messages they receive.

Laurence Anthony: Another factor is the trend toward outsourcing. In his book "The World is Flat," Thomas Friedman explains how countries are beginning to outsource their noncore IT/engineering tasks to firms in places like India and China. You can see this in Japan, too, where, for example, more and more firms are now outsourcing

ample jobs for engineers at the levels from the top to the middle that normally require relatively high-level language capability and even for the production line engineers, who now use only a minimal vocabulary at best when communicating, such as on line operation standards. The majority of those engineers are at the risk of losing their jobs. When I was working for companies in a group,

skills," according to a 2008 study conducted by Ikuo Koike, an honorary professor at Meikai University, and his group as a Grants-in-Aid for Scientific Research project. Also, when asked, "Which English skill drastically needs to be improved in the coming decade?" over 73 percent of the respondents pointed to "listening and speaking skills." Finally, when asked about their desires for college English education, over 70 percent replied that they wanted universities to teach practical language skills that can be used from day one.

There is a huge gap in what corporations want and what the current education system provides. Current English education in Japan focuses too much on passive skills: reading and listening. But the demand in the real world is productive skills: speaking and writing. I'm afraid this gap largely stems from the overdependence on the TOEIC test as the sole indicator of English skills both in industry and academia. While TOEIC is in itself a handy and perhaps good passive skills test, I am very concerned about the way it is used in Japan today: People mindlessly use it beyond the scope it is originally designed to test. As a result, productive skills training, which is crucial to fostering Japan's competitiveness, is greatly neglected.

Anthony: I don't think TOEIC is a bad test. The problem is how we use it. Companies say that they need people with productive English skills, but they are only using the TOEIC score to measure these skills. The TOEIC is very convenient since it's easy to take and gives a numerical score so progression can be tracked easily. As a result, most companies require students to put their TOEIC score on their resumes. But TOEIC only measures general proficiency. There is a huge discrepancy here. The need for productive English skills changes into a need to improve TOEIC English. And to fulfill these needs, universities are pressured to teach it during class. It's just like a college entrance examination. If that's the goal, people will work hard to achieve only that.

Moderator: Is there any way we can resolve this issue?

Hirai: We need a sort of common framework for English education and evaluation so that people can discuss relevant issues on the same ground. The most important piece of such a framework is a set of "Can Do" statements (statements that describe what language users can typically do with a language at different levels and in different contexts) as advocated in Europe and the U.S. I must add that we need "Can Do" statements not only for general English but also for English for Specific Purposes. **CONTINUED ON PAGE 9**

Japanese engineers are also non-native English speakers. So it becomes even harder to convey delicate nuances. Here, I would dare to say that this situation normally works as an encouraging factor because the barrier the Japanese engineers feel seems lower than when facing native English speakers. Yet still I believe they should aim at the high-level communication with native English speakers who expect to receive

their software development overseas. What was once a business collaboration involving two countries has expanded into one involving multiple countries. And as a result, English has become the common language people use to communicate.

Moderator: Will this trend continue? What will happen 10 years from now?

Yamazaki: I only see this trend accelerating. There is now a "Little India" in Nishi-Kasai (Koto Ward, Tokyo). More and more skilled engineers are coming to Japan. In 2007, I witnessed a Japanese automobile company transferring its CAD (Computer-Aided Design) division to Vietnam. The Vietnamese who took over this job had all graduated from Hanoi University, which is equivalent to Tokyo University. Japanese engineers are pressured to produce outside Japan but must be able to compete with bright foreign engineers in Japan as well. I wonder whether we can maintain our current competitiveness. Also, the latest technical information is written in English. And engineers often solve problems through online communities. To keep up-to-date on what is happening in the technical world, you need to be able to read and write English. This trend will only get stronger.

Anthony: There's also growing pressure for change coming from within Japan. Carlos Ghosn has been leading Nissan for 10 years. Howard Springer is now the CEO of Sony. Even in sports, you can see that Marty Brown is now the manager of the Hiroshima Carp. Globalization is no longer happening only outside of Japan.

Hiraga: Many people think that as long as they are in Japan, they are exempt from using English. This is a big mistake that has never been considered so. Going forward, there should still be



Overseas shift: Local employees work at a factory of a Japanese company in the suburbs of Glasgow, Scotland. As Japanese corporations are stepping up a shift in production to foreign countries, Japanese managers are facing the challenge of communicating in English with their local hires. KYODO