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Short Communication

Human Factors and the use of Simple Language

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SHORT COMMENTARY

Communication is one of the human factors. Even two individuals use the same language, either English or their mother tongue, it still has problems. The problems often occur due to the mismatch between expectations and actual communications in accomplishing a task or activity. The information should be communicated to the right individual at the right time using the correct codes, context, terminology, and words. The individual, who received the information, should attend to the sources of information and acknowledge it.

Many researchers spend their time reading and writing papers, preparing proposals, doing experimental work, and communicating with professors, students, and industrial people. Researchers, who accustomed to the norm, could have difficulty communicating with people from different levels and backgrounds. I sometimes experience such situation. I believe some researchers have the same experience.

It is challenging tasks for a researcher to use a simple language describing or articulating the research work or interest to general audiences. They include individuals in the same field or background but have distinct age gaps. I taught human factors course for the first time to undergraduate students of Bachelor of Engineering (Chemical) in fall, 2017. I prepared the course materials before the class started. Anyhow, it is not an easy task to make the lecture notes and teach students using a simple language in the context of the chemical engineering field.

Many books of human factors are written for industries and engineering from different fields such as aviation, maritime, medical, and nuclear power plant. While preparing the lecture notes, I search for recent references books of human factors, specifically in the field of the chemical processing industry. The Center of Chemical Process Safety (CCPS) has published two books related to the human factors in process safety; i) Guidelines for Preventing Human Error in Process Safety, and ii) Human Factors Methods for Improving Performance in the Process Industries [1]. The Keil Centre published one book that provides a comprehensive overview of human factors and focuses on the application of human factors in the chemical processing industry [2]. Both books, 'Human Factors Methods for Improving Performance in the Process Industries' Attwood et al. and 'Human Factors in the Chemical and Process Industries: Making it Work in Practice' (Edmonds, 2016), explain the importance of communication in the chemical processing industry [3]. The books are the perfect references for researchers, engineers, managers, industrial bodies, and regulators to have a deeper understanding of human factors in the chemical processing industry.

I looked for more articles introducing human factors in a more straightforward language than the books as mentioned above. Fortunately, I found it from websites. I fascinated by articles from the website of Human Factors 101: Introduction to Human Factors & Ergonomics (https://humanfactors101.com) written by Professor Martin Anderson [4]. Articles on the website are helpful to general audiences, including my undergraduate students who have no introductory to or little knowledge of human factors. Professor Anderson shared his 'human factors' experiences, which I find easy to be understood by my students. Remember, some of my students have a brief experience in industrial.

There are many videos on YouTube explaining the introductory of specific topics. The presenters are also used simple language to educate general audiences on any interesting topics. Such videos include the topics of human factors. My students and I listen to audio or learn something from established researchers. For instance, Professor Sidney Dekker (2016a–e) uploaded many videos explaining human errors to general audiences [5-9].

Communication using a simple and understandable language is essential for individuals who are from different generations. My students and younger generations in my country use shorter words and sentences when texting or writing to describe a specific topic or context. Verbal communication between themselves is faster than communicating with older individuals. This form of communication, in particular, involving different age gaps, affects mental information processing. Consequently, human actions

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and behaviours depend on the information interpreted by the individual.

In conclusion, communication is a significant human factor leading to human actions and behaviours. Simple and plain language could influence the interpretation of information. The human factors study should concern the language proficiency between individuals from different levels of job positions, backgrounds, cultural, and so on.

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