LIFE IS A PUZZLE TO BE SOLVED

Smiling eyes framed in square spectacles, sipping from the porcelain of sweet aromatic coffee, Professor Kai Ming HO sat cozily in the armchair as we began slipping into his life of problem-solving.

PROF. KAI MING HO

1972 BSc Graduate (General)
1973 BSc Graduate (Special)

Major Achievements

- Professor, Iowa State University
- Associate of Division of Materials Science & Engineering, The Ames Laboratory
- Senior Scientist, The Ames Laboratory
- Distinguished Professor in Liberal Arts and Sciences, Iowa State University
- Fellow, American Physical Society
- Energy 100 Award (USDOE), 2001
- Science 100 Award (USDOE), 2001

"Do not bang your head against the wall!"

Life was like a game of chess. This story was to unfold how Professor Ho had moved himself in his game of chess. Professor Ho, who was a condensed matter physics specialist, did not think of engaging in this field at the beginning.

He was interested in meteorology, but UC Berkeley did not provide related courses at that time. Being open to options, Professor Ho made his move into unchartered waters. He took a course on condensed matter physics, passed the exam with flying colors and was recruited as a research assistant. That was how he embarked on a journey to become a fundamental research scientist.

As a fundamental research scientist, Professor Ho took great pleasure in solving puzzles, including playing chess, for the dynamic and unpredictable nature of the game somehow resembled the process of addressing a fundamental science question.

In chess, at one moment you may have the upper hand, but the tables may have turned in the next. Similarly, to find the most plausible answer to a science problem, one must have the diligence to rack their brains on the complex problem, the wit to redefine the approach and the openness to collaborate with people across multiple disciplines. As the Chinese proverb went "blind man touching elephant"（瞎子摸象）, it was only when scientists came along and put their heads together, did they stand a chance to get a comprehensive picture of "the elephant".

"What is the right question to ask though when facing such a big problem?" the student reporter challenged by asking this hypothetical question.

"Practise asking the right question." was the reply. While a problem well put was half -solved, it all began with a courageous heart of not being afraid to ask dumb questions. That was why as a professor at the Iowa State University, Professor Ho showed rapport and encouraged his students to ask questions. He was like a patient chess master teaching his apprentice how to master various moves and plays.

While taking the role to teach his students how to play their own games of chess, Professor Ho recalled a piece of memory of how he moved himself in his game when he was an undergraduate himself. Back then, a teacher assigned Feynman Volume II, an advanced textbook filled with inadequate examples and exercises, to year one students. Most students were deterred by this. Unlike them, Professor Ho accepted the challenge head on by forming a study group to self-learn the contents of the book, even though they were out of syllabus.

When asked about how one shall prevail amid obstacles and setbacks, Professor Ho looked into my eyes and said mischievously, "Don't bang your head against the wall!"

As we broke into laughter, he added, "Since you know your head is not harder than the wall, you shall ask yourself if there are other ways to get pass the wall." His light-hearted attitude lifted the frown from my face. It made me realise that on the winding road of research, one must not only have the passion to forge forward, but also the collectedness to sit back and reflect.

So, what are you waiting for? Take the challenge. Make your move.

STUDENT REPORTER

"Scientists may sometimes be stereotyped as hard, cold, logical thinker. Yet, it is not the case for Professor Ho. With a playful attitude towards problem-solving, he inspired me how to move my chess piece in the game of life with confidence, composure and craft."

Alice Leung, BSc Student
(major in Molecular Biology and Biotechnology, minor in Psychology)