



THE INTRICATE RELATIONSHIP BETWEEN TECHNOLOGY, KNOWLEDGE AND CREATIVITY

Ten years – yes, a decade. This is the amount of time needed by an individual to construct and gather extensive domain-specific knowledge and measured practice for successful creative productions. This ten-year rule was introduced by John R Hayes, a creativity theorist, in 1989 to discuss his studies on creative process where he exemplified the likes of Newton and Mozart. These creative individuals spent years learning, networking, researching and practicing to finally produce their notable works.

If we were to consider how knowledge was disseminated and exchanged 20-30 years; how research was conducted; and how far people had to travel to attend dialogues for intellectual exchange, it is not possible that 10 years are required for an individual to become mature with their creative potential. However, today we have technology, the advanced tool that can help us extract an abundance of information and connect us to people around the globe in a blink of an eye.

Ten seconds? – Yes, pretty much. We actually need less than that amount of time to utilize the Internet and make the technology extracts enormous amount of information. We need about that amount of time to set up Skype and start international dialogues and forums for intellectual exchange, which mean we can cut short our travelling time. And if we have our mobile devices with us, we can do it anywhere and anytime. Hence, all the troubles faced by people 2-3 decades ago

are now mostly irrelevant.

Does this mean that with technology people can become mature with their creativeness in a shorter period of time? Did we have more creative people today than 10 years ago? Did we have more intellectually capable people today than a decade ago? Or rather, can technology actually foster and enhance creative development? Can technology help people to construct sufficient knowledge for creative cognitive processing?

Creativity requires knowledge, and the knowledge constructed has to be manipulated. Edward de Bono, a proponent in lateral thinking and creativity, claims that creative cognitive processing involves the ability to communicate ideas and manipulate new and old ideas to create novel ideas. The technology that we have today makes it possible for us to obtain information and communicate the information into ideas. However, the most important question is whether technology can play its role in knowledge construction and creativity development.

For many months, I have observed my students and discussed their work together, trying to explore what is technology to them and where does technology fit in making their academic life intellectually and creatively better. In the end, I have come to realize that technology, unfortunately for most, is an easy way out. When a question is asked, they will Google it. When they are asked to define a term, they will have a peek at

the online dictionary. Sometimes, it is frustrating that they depend too much on technology that they rather let it answers all questions thrown at them, the spongers of the digital age.

Ironically, we need technology. I need technology. In fact, it was the vast advancement of technology that led to the encouragement and implementation of educational transformation to promote creativity, innovation and thinking skills through the National Higher Education Strategic Plan. Looking at how *Apple-savvy* everyone is today – students and teachers alike – technology is an important element of the educational package.

And as a teacher, the task of balancing the use of technology to ensure students' intellectual and creative development and their learning experience is challenging. The internet is a great source of information, but how to transform this information into knowledge, and later construct sufficient knowledge for creative production is a different challenge. We know that technology is important in education, but to ensure a successful marriage between technology and creativity depends on how knowledge can be bred and properly raised, and this is intricate.

Written By:

Dr. Hafizoah Kassim

Senior Lecturer from Centre for Modern Language and Human Sciences, Universiti Malaysia Pahang (UMP). Email: hafizoah@ump.edu.my.