



The ubiquity of bottled water

My university has joined in the bottled water craze. I have just seen UPM's bottled water about two weeks ago. Though the water is purified tap water and not groundwater or springwater, we, the lecturers, were unashamedly gulping it down once they started to distribute the bottles. Faster than you can say "Universiti Putra Malaysia", some lecturers were already half done with their bottled water.



Here, there, everywhere (photo from www.buzzle.com/articles/bottled-water-industry-effect-environment.html)

If you have seen our bottled water, you would agree that it is small, petite, and cute. Nice to see, nice to hold, and very nice to drink as well. And if you are a UPM staff, you would also feel, well, all patriotic by drinking your university's very own water.

How did we get conned into drinking bottled water? This is the question asked by [Elizabeth Royte](#) in her book "[Bottlemania: How it went on sale and why we](#)

[*bought it*](#)". The insidious marketing attempts by bottled water companies have certainly paid off handsomely. In the US, sale of bottled water has surpassed that for milk and beer, and it is just second to soda (soft drinks). And if current sale trends continue, more Americans would be drinking bottled water than soda by 2011.

We were conned into drinking bottled water because we believed the hype. We believed bottled water is cleaner, healthier, and more convenient. This is what the marketers told us, and we believed them. In a limited study done in Malaysia by Aini et al. (2007), for example, 86% of those surveyed in Seremban believed their tap water was either poor or very poor.

And yet, science tells us otherwise. On-the-street tests have shown that people cannot differentiate between tap water and bottled water. Laboratory tests have revealed that tap water is neither cleaner nor dirtier than bottled water. Additionally, tests have shown that some bottled water actually contained dangerous elements (such as antimony and bisphenol A) that were leached from the plastic bottle into the water and bacteria. In other words, laboratory tests revealed no clear winner between bottled water and tap water.

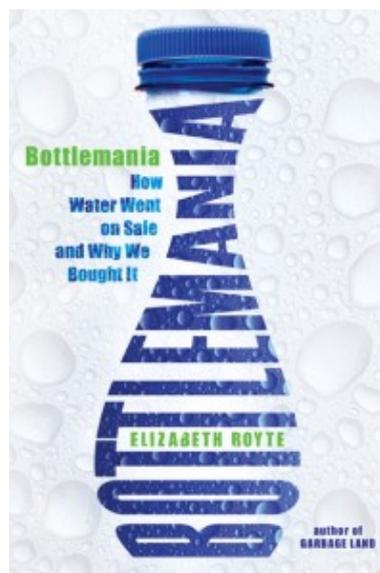
Also consider the fact that water treatment plants (those that supply clean water into house taps) are regulated and monitored tightly by the government, but those that supply bottled water are not. In other words, there would be "hell to pay" if water treatment plants supply unsafe water to households, but there is little regulation for bottled water companies and, well, UPM.

Most of all, bottled water is environmental unfriendly. According to a study by Gleick et al. (2006), bottled water production consumes between 1100 to 2000 times more energy than that for tap water. In US, the energy required for the production of bottled water, including its transportation and disposal, is equivalent to 32 to 54 million barrels of oil per year. In 2007, Americans consumed a whopping 33 billion litres of water. One barrel of oil is about 159 litres, so this would mean that for every one litre of bottled water, about 0.25 litre of oil is required. If your head aches with all these advanced mathematics, just imagine a one-litre bottled water that is one-quarter full of oil — that is the amount of oil needed to produce your bottled water.

In addition to requiring vast amount of energy, bottled water also depletes

groundwater sources. For instance, two litres of groundwater is required to produce one litre of bottled water. This net loss means if the consumption of bottled water keeps increasing, the extraction of underground water would become unsustainable. In other words, we extract more than what can be replenished from rivers and rain. Though Malaysia is blessed with ample rain, other countries are not. In some countries like India, groundwater is already depleting every year, so bottled water demand only exacerbates the problem.

And if demand for bottled water increases, this puts pressure not to regulate tap water as tightly as before. Why spend the effort, time, and cost to ensure clean tap water if no one is going to drink it anyway? So if consumption of bottled water becomes a replacement for tap water, then don't be surprised if one day, our tap water is classified as gray water - suitable only for washing but not for drinking. If you wanna drink, you just have to get out and buy yourself a bottled water (which, by the way, costs more than oil in Malaysia).





Bottlemania by
Elizabeth Royte

Source

Aini, M.S., A. Fakhrul-Razi, O. Mumtazah and J.C. Meow Chen. 2007. Malaysian households' drinking water practices: A case study. International Journal of Sustainable Development & World Ecology, 14, 503-510.

Gleick, P.H., H. Cooley, D. Katz and E. Lee. 2006. The World's Water 2006-2007: The Biennial Report on Freshwater Resources. Washington DC: Island Press.

Royte, E. 2008. Bottlemania. How water went on sale and why we

*bought it. New York:
Bloomsbury.*



The audacity to learn English

Ever since the Malaysian government decided to revert to using Bahasa Malaysia as the language of instruction at schools, there have been screams of protests in the form of letters and articles in newspapers. Yes, we all know the importance of English. Yes, it is the lingua franca in international politics, business, and education. Yes, nearly one-third of the countries in the world use English as either their first or second official language. And yes, we also know that the majority of books and online content are written in English.



Its because I learn English
not easy (photo from
www.myuncledanshop.com)

Yes, yes, we know all these, so why then is the policy of teaching in English being rescinded? This is because there is a difference between knowing something is good for you and actually doing it.

Although many reasons have been given for the rescinding this policy, I believe the main reason is simply that most Malaysians are just not bothered or care enough to pick up the challenge to learn English. Though Malaysian intellectuals may write their letters and articles of protests until their faces turn red, the reality is most Malaysians are not intellectuals, and they do not care enough to improve themselves. In other words, it is just too darn difficult.

At UPM, I teach a subject called "Agriculture and Man" which is a compulsory subject for all undergraduates, irrespective of their degree course. For two semesters, I taught a large group of English literature undergraduates who share the same problem: the majority of them have a poor command of English! One even said that she expresses herself better in Malay than in English. Even though I teach in English and my notes are fully in English, these English literature students still prefer to answer the exam questions in Malay.

Many times, I am an English teacher first, then a science teacher. I have difficulty understanding the written assignments by my students. I have to correct their English sentences first, then proceed to check their science facts.



I am now know its safe to using (photo from
www.flickr.com/photos/herdgotti/161304068)

However, there is hope for individuals who both understand the importance of English and who are willing to work hard to master the language. While the majority of Malaysians in the future would be babbling their English words, great opportunities await those who stand out because they can write and speak fluently in English.



Learning Management System (LMS)

Last week, I was “forced” by a certain person to participate in the Putra LMS workshop. I say “forced” because I was actually planning not to attend the workshop, even though attendance was supposed to be compulsory.

Putra LMS stands for my university’s [Learning Management System](#). Essentially, Putra LMS is a system where lecturers can upload course notes and other materials that students can download. It is also a system where students and lecturers can participate in forums. With Putra LMS, lecturers can also enter students’ tests results and class attendance.

However, our current SMP (Sistem Maklumat Pelajar) is not in speaking terms with Putra LMS, so test results entries would not be transferred to SMP (and vice versa). Also, the student list for a course is also not updated in Putra LMS.

In short, you would be wasting your time with Putra LMS if you use it to keep

track of your students or use it to enter the students' test results. And you would also be wasting your time with the other features in Putra LMS because, frankly, no one either knows about it or even if they do, will care. Think of Putra LMS like a fancy TV remote control — copious buttons but all you need is really just the On/Off, Volume, and Channel buttons.

Nonetheless, I found the latest changes to Putra LMS much less irritating than before. Previously, I absolutely loathe it mainly for two reasons: 1) upload per file is limited to 5 then to 10 Mb (which is as good as 0.0 Mb in both cases), and 2) an embedded user interface that forces you to click here-and-there and everywhere else just to find where that certain darn command is.

Anyway, they have increased the file upload limitation to 50 Mb per file, and they cleaned up the user interface. Although I will still use my homepage to upload my files, I will complain less whenever I am “forced” to upload my files to Putra LMS as commanded by UPM authorities.

Now, as mentioned earlier, I was “forced” to attend the compulsory Putra LMS. Why attend when I already know how to use Putra LMS (or even if I am stuck, I can probably find the solution by myself)? Anyway, I was “asked” to attend the workshop so that I may be, like, the resource person for my department. Yeah, right. I wait patiently for my first call for help.

Anyway, I must be in some Zen-like state of mind or something because, at the end, I was rather glad I attended the workshop. At least, I got to know about the changes in Putra LMS, so at the end, I now hate less Putra LMS!



Complain for complain sake

Lim Kit Siang, the leader of DAP opposition party, recently complained about an Iraqi chap doing his Ph.D. at USM who could not understand or speak in English.

[“PhD student in USM who does not understand English or Malay!”](#) screams Kit Siang’s blog title. This is his response to [Bernama news article](#). However, if you read that short news article, the story is actually about a Ph.D. Iraqi student being detained by the police for reckless driving and causing death to another university student at USM.

Now, don’t get me wrong. It is indeed shocking that a student (Iraqi or not) in any local university simply cannot understand a word of English — even this is debatable, perhaps the Iraqi cannot express himself well enough in English, or he is in a state of shock or waiting for representation from his embassy — the news article is just too brief.

The Bernama news item is about a serious incident: the death of a student due to a reckless driving accident. Bypassing that scene and only seeing the fact that the perpetrator cannot understand English as an indication of USM’s standard of English is, well, careless and inappropriate. It’s like a man who is rushed to the doctor for a serious gunshot wound, but the doctor only complains about the man’s dirty shirt which is badly stained with blood.

Kit Siang’s blog summarizes what I think of DAP: lots of complaining. It is very easy to pick any topic and criticize/complain non-stop. See, I even complaining now! It’s easy...try and see.



LOKI: Important but poorly implemented

“Local undergraduates are often timid, immature, passive, and lack of hands-on experience,” say employers. So, what’s the [Ministry of Higher Education \(MoHE\)](#) to do? Enter LOKI, an odd acronym because it is a mishmash of English and Malay words. LOKI stands for “**L**earning **O**utcome and **K**emahiran **I**nsaniah,” where “Kemahiran Insaniah” means “Soft Skills” in English.

LOKI is a teaching and learning strategy to mitigate the less-than-satisfying production of university graduates. LOKI focuses on two broad tactics: the change from teacher- to [student-centred learning \(SCL\)](#) and the inculcation of soft skills among university students. So, instead of the lecturer taking center stage in the class and students learning passively, the students are involved more actively through group discussions and working to analyze and solve real-world problems.

SCL is closely related to the inculcation of soft skills. Because the focus in class has shifted from the lecturer to the students, this will, in turn, lead to students who are more vocal, more proactive, more socially, politically, environmentally, and economically aware, more ethical, and more a team player. In other words, the soft skills of students would have been improved.

So what’s not to like about LOKI? Although no one refutes the importance of LOKI, I suspect there is an unspoken assessment among university lecturers that LOKI has *so far* been a failure.

My university is actively involved in LOKI. All courses have either been modified or revamped—even new courses introduced—so that they contain elements of SCL and soft skills. Lecturers are even expected to ensure that a certain minimum level of soft skills is achieved for each course they teach. So what you have at the end of all these enrichment activities is an implementation of LOKI that looks good on paper but hides its teething problems.

Mastery of a certain soft skill takes time, often longer than a single semester in a single course. A shy student cannot just be plucked out and placed in the front of the class every time and be expected to be an extrovert by the end of the semester. Yet, this is the expectation for every lecturer that, in a single semester,

students must be able to master in certain soft skills.

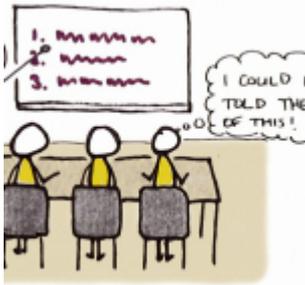
Students have also been deeply entrenched in a learning environment since Year One in school whereby the teacher takes the center stage and the teaching is strictly one-way traffic: the teacher imparts knowledge and the student listens but do not ask questions. Suddenly, students are expected to analyze and solve some problem by themselves and be all, like, proactive. Moreover, students are often not ready to analyze and solve a given problem by themselves. There are two reasons for this: First, they often lack the necessary background knowledge and skills, and second, they also lack the motivation and ability to read up. Reading skills even among university students is very poor, and I think this is partly because of the students' poor command in English (as most books here—the good ones at least—are written in English).

Also, most lecturers would be not ready or want to swap their more prominent role for what they think is a lesser role of a guide or facilitator for the students.

The last problem is the way LOKI's success (or lack of it) is evaluated. I attended a talk by CADe ([Centre for Academic Development](#), UPM) two days ago. The talk was about, among others, on evaluating the change in the soft skills among students. I learn two things from the talk: 1) that there was no significant change in the soft skills among students even after two years in UPM, and 2) this non-significant result might not even matter because of the non-scientific, almost haphazard way these evaluations were done.

So, although LOKI is an excellent and vital strategy, its implementation can be considered as a rush job. Universities and students are simply not ready for it. Lecturers are not committed and are not trained enough in SCL; students are uncomfortable with it and lack the motivation and skills to self-do and self-learn; and authorities do not know how to scientifically evaluate the success or failure of LOKI. Moreover, LOKI should not just be limited to universities, but implemented as early as in the primary school stage. Most importantly, inculcation of soft skills is most effective in extra-curricular activities in schools and universities rather than in the classrooms.

Nonetheless, LOKI is essential to change the attitude and to improve the soft skills of students. Rather than abandoning LOKI, we should embrace it and trudge on with it, but we need to amend it very badly.

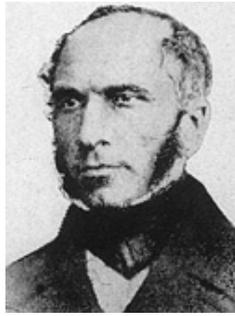


Hindsight wisdom is of no use

Several years ago, I presented the progress report for one of my research projects in front of an evaluation committee, set up by the Ministry of Science, Technology and Innovation. The committee people were from various background and institutions, but it was the head of the committee whom I remember most vividly. Perhaps he was frustrated with the slow progress or unsatisfying results from the other researchers before me. Perhaps he was just having a bad hair day, or perhaps he thought his role in the evaluation committee was akin to being an American Idol judge. Whatever his reasons were, he was bordering on being rude and unprofessional. But that isn't what I want to talk about; it was something he said to me during my presentation.

During my slide presentation, I showed the committee one of my results. It was a conceptual diagram of how a “plug-and-play” feature could be developed for agricultural models. The head of the committee was obviously unimpressed by my colourful diagram. He further remarked that my conceptual model was, well, blindingly obvious. Which now brings me to the issue of “hindsight knowledge”.

Hindsight knowledge makes us think that the solution to a given problem is obvious but only after the solution is presented or revealed to us. The solution to a problem may appear obvious, but prior to the answer being revealed to you, would you know the answer? For instance, after the solution has been revealed, you might say, “Of course, that's the answer. It's pretty obvious.” But prior to the revelation, would you have really known about the “blindingly obvious” answer? Vision is always 20/20 at hindsight, isn't it?



Henry Darcy
(1803-1858)

Science has several examples of “blindingly obvious” solutions. I can think of the well-known [Darcy’s Law](#) to calculate the flow of water in porous medium. It was derived by Henry Darcy, a French engineer, in 1856. Using several simple and cheap apparatus, he observed that the flow rate of water through a porous medium (saturated sand, in this case) was proportional to the difference in pressure between the inlet and outlet and inversely proportional to the length or distance the water has to flow through the medium. Today, his experiment can be easily repeated in your home (and no doubt, this experiment is routinely taught in many soil physics laboratories for undergraduates in universities). And no, there is no need for either fancy and expensive equipment or the patience of Job for carrying out this experiment.

Today, I look at the simplicity of Darcy’s work, and I think, “Well, I could have done this. It’s easy and obvious.” Of course, with the benefit of hindsight knowledge, I could have done what Darcy did, and the law would have been named after me today. But, it was Darcy, not me or anyone else, who did it first. It was Darcy’s insight and creativity that helped him to develop what is now the widely-used equation in hydrological studies.

Which now brings me to what happened yesterday. Yesterday, I presented my research progress report in front of another evaluation committee. This time the progress report was for my research under MOA (Ministry of Agriculture), and the presentation was held at Residence Hotel, Bangi.

I managed to talk to some of the researchers who had earlier finished their presentation. The researchers said they were grilled by the committee. The committee, they said, were tough, questioning the researchers’ methods and to one researcher, even saying...*wait for it...* “Your results are obvious. Nothing new here.” Like a flashback, I was reminded of my experience from that many years

ago.

Fortunately, when my turn to present came, there was none of the nonsense I experienced the last time. The committee comprised four people. Prof. Zin Zawawi was there too. I think the committee were impressed by my work progress. I think the brief report I wrote for them and the simulation results impressed them enough that I have been doing my work. I know one Professor who has yet to start any experiments even after one year! I am not sure how he is going to spin his lack of progress (or rather no progress) in his presentation.

I like to end this entry with an Indian proverb: “Hindsight wisdom is of no use”. Well, frankly, I think that’s pretty obvious.



So I blog

Yeah, right, so I have a blog now. I have been thinking about starting one for quite a while, but I was reluctant, thinking my blogging activities would eventually degrade into maintaining some Japanese cyber pet, or better known as Tamagotchi, where I have to remember to upkeep my blog; otherwise, my blog will just, like, die.

That said, however, I am not going to deceive myself into thinking that if I start a blog, my blog will be well read and loved by the thousands. I am just hoping for a non-embarrassing readership count.

“No one cares about your blog,” so says the tag line on T-shirts, mugs, pens, and mouse pads that you can buy online. I think this tag line a valid reality check. You can blog your entire life or try to discuss about every topic under the sky, but the

outcome is most possibly: “Who cares?”. Really, who cares about what you ate for breakfast this morning, or what you did at last night’s reunion dinner with your buddies.

Blogs that succeed are those that have something useful information to offer. So, a blog that, say, talks about nothing else but food may draw in the crowd because readers find the reviews about the various restaurants, food, and prices useful. Or maybe not, since such food blogs are a dime a dozen nowadays.

Perhaps consider [Dr James Hansen](#), a climatologist, who could easily pull in the readers with his blog. He is a world-renowned scientist, so people are interested in his thoughts and experience on climate change issues, as well as his fight against skeptics (even those in his own organization, NASA) on anthropogenic climate change.

And, of course, there is always the blog by Malaysia’s former prime minister, [Tun Dr Mahathir](#), who is able to pull in potentially 50,000 readers per day. I suspect many people see Tun Dr Mahathir as absolutely brilliant at one moment with his think-out-of-the-box opinions and brave, biting remarks, but in another moment, making absolutely ridiculous remarks – and that recipe makes his blog interesting.

So, it is important to have the proper perspective and expectation on my blog. Should I then treat my blog like therapy, a sort of talking to myself, about letting off my rants and raves? But what I really want is a blog that states my opinions on science and agriculture topics. That is, after all, what defines me and what I do. And no, I would not go down the road of having a food blog – heaven forbid. Perhaps even my students may read my blog and gain a better insight about their taskmaster.

As for getting a blog, I wanted a free one that I could host from my website rather than hosted elsewhere (such as Blogger). I wanted my blog’s URL to read something like: “christopherteh.com/blog” (or even “blog.christopherteh.com”) rather than “christopherteh.blogspot.com”. I knew from reading that going solo (that is, setting up a blog on your own) can be quite daunting. For example, [Moveable Type](#), one of the more popular blogs, required me to wade through tons of cryptic documentation of how to install, use, and customize the blog. Goodness gracious me, I probably need a six-month sabbatical leave just to install the darn

thing! Ok, I exaggerate, but I do not have the patience or motivation for all this. Really, must installing a blog be so rocket science?

Then, by accident, while I was mucking about with my website's CPanel, I discovered that my [web host](#) (bless you) already provides a [WordPress](#) script (bless you too), complete with automagic installation! Installation was a three-step process: just filling in basic information about my blog and where I want to store my blog files, and walla, within five minutes, a working template of my blog was born. Customizing my blog is also easy. So what you see here is essentially less than a day's worth of work.

And with that, folks, I now begin my blog...