



# The power of Rachel Thomas Tharmabalan



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The power of Storytelling

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#### **Editor:**

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Who doesn't love a good story? I for one thrive on good stories. May it be fairy tales, personal experiences, stories about life, or heartbreaking stories, there is always a form of connection between the story teller and the listener. Most of the time, there is an interrelated connection between the stories and how the world works, thus giving listeners the opportunity to feed their minds with knowledge.

I'd like to begin by asking you about listening to stories in your own experience? When you were small:

- Where did you tend to listen to stories?
- What time of day was it, typically?
- Who told you or read you stories?
  - **★** How did you react to the stories?

### Now that you are older:

- Have you read or told stories as a parent?
  - What are your feelings about the parental role?

The point of these questions and the answers you have formed in your mind is for you to realise how you yourself relate to stories. My impression is that most people relate pretty strongly to stories experienced in early childhood.

I will never forget the wonderful stories my standard 4 science teachers used to tell us when I was a young girl. It was no easy task to teach a group of 40 female students who were on the verge of becoming adults. Sitting at the back of the classroom, I would watch my teacher write on the blackboard and draw various science-related pictures. The students at the front would be shouting and throwing various objects at one another. If you have ever been to a night market, that was the scenario in the classroom day in and day out. Although we were the top students in our school, which was one of the most prominent schools in Penang, we terrorized teachers frequently. Ms Ong, however, never gave up on us despite our bullying. When most of us did badly on one of her quizzes, she decided to change her teaching method. She made

science fun. She would tell stories about various life issues but relate them back to science. She also used to strum her guitar and sing melodious songs about hot blooded and cold blooded animals, also known as amphibians, reptiles, and mammals.

One of her stories that stuck with me was about living things and objects. In the previous class, she had told us that a Harley is a type of animal that only comes out at night. She provided us with various descriptions until we concluded that the Harley was a cat. She gave us a quiz after based on what we learned. When our papers were returned, there was a big red X through all our asnwers. It was then, I realized that everyone in the class had failed. When we approached her, she explained that there has never been a Harley. She had made everything up. It was then it struck me, that during her class, she kept mentioning that there were no traces of the animals' remains. She hoped we would learn something from this experience. Teachers and textbook are not infallible. In fact, no one is. She reminded us not to let our

minds go to sleep, and to speak up if we ever though she or our textbook was wrong. It took us almost the whole week to explain to her that the Harley was not a real cat. She kept throwing tons of questions at us until we had mastered the Science topic at hand. Ms Ong didn't let us off the hook until we had proved not only that we knew what an organism was but also that we had the fortitude to stand up for the truth.

This example embodies my point about storytelling. Students loves stories, and storytelling puts students at ease. Thus, being able to tell a story in an interesting and compelling way is an important teaching skill. This is because a good story is not only entertaining, but it is also

can hold students' attention while they learn important concepts, attitudes, and skills.

Recent studies have shown that storytelling is the best way for our brains to use information effectively. Lecturers who are able to

craft a good story will capture the hearts of the students and also create an atmosphere of learning. For example, one of my professors in Food Technology, Prof. Abd Karim Alias, always started his class with a story that correlated back to the day's lesson. His class always had near perfect attendance due to his ability to make the class interesting. Whenever he said 'Let me tell you a story', the students' faces always lit up. Although his classes were usually at 8 am, our drowsy faces and bodies awoke once he said those magic words.

The most powerful effect of a story is that is that it changes the attentiveness of the class. Students are no longer focused on the teacher alone but on themselves as well. Although times have changed drastically over the past few years, there is one thing that technology can't do: It can't reproduce the power of storytelling. Philosopher James Stevens wrote, 'The head does not hear anything until the heart has listened. The heart knows today what the head will understand tomorrow'. The things that we learn and remember usually stick with us because on some level we can relate to them personally. If we use stories in our teaching, it may give our students a better opportunity to connect to a more personal kind of learning.

The power of the story lies, of course, in the text but also, and centrally, in the relationship between the teller and the students. The fundamental part of teaching students is to allow them to express and to discuss their points of view effectively. Students in Asia are very passive, but once you open up and tell them a story, be it a personal story or a myth, it sets the tone for students to interact and to comment on their thoughts regarding the story. Interjecting that human component and assimilating ideas based upon our own personal experiences not only allows students to begin to connect all the dots, but it also may help students feel more confident in their understanding of the subject matter. An added bonus is that students enjoy this process.

Stories in the classroom can be a fundamental way of making discussions more meaningful. Author and scholar Kieren Egan wrote this about teaching and storytelling: 'Thinking of teaching as storytelling rather than a lecture encourages us to think of curriculum as a collection of great stories of our culture. If we begin to think in these terms, instead of seeing the curriculum as a huge mass of material to be conveyed to students, we can begin to

think of teachers in our society as an ancient and honored role. Teachers are the tellers of our cultures role'.

One of the reasons why Prof. Karim was very well liked was because he was able to captivate students, and that trait won him the National Academic Award in 2010. He knew how to press the right buttons. He made sure that he built a strong relationship with his students. Students who found some of the courses offered at Food Technology hard still had few problems relating to him. The stories he told made us feel that he was human and also gave an opportunity to students who were passive in class to open up and share their own personal experiences in relation to the stories he told.

Mario Rinvolucri broke down storytelling into the following five approaches:

- a. Mixed language storytelling
- b. Multi-voice storytelling
- c. Sandwich story creative writing technique
- d. Two truths, one lie

# Mixed language storytelling

In Malaysia, which is a melting pot of cultures, many different languages are spoken. One way to make students feel comfortable is by using Manglish (a mix of Malay and English). When teachers tell a story, they can use English as the main language of instruction, but they also can throw in some Malay or Mandarin words here and there. This is called the mixed language method of storytelling.

#### Below is an anecdote that illustrates this approach:

There was a young couple who were expecting their new child (*Anak*). They were very poor. The man was a fisherman. He went out to sea everyday to catch fish. (*ikan*). The wife (*isteri*) was a housewife. She always waited patiently for her husband to come back from sea.

One day the wife got worried. It was almost 7:00 and there was no sign of her husband (*suami*). She called the neighbours. The men went out to sea to find him. Lo and behold, they saw him returning with a huge pearl. That was a turning point in their life. They instantly became rich (*kaya*).

Based on this story, students can understand some of the Bahasa Melayu words in the story without too much difficulty. The best thing about bilingual stories of this sort is that they work wonders with small kids and people at this stage of linguistic brilliance (3–8)year olds, who lap up and 'interiorize' the new language without realising what is happening in their minds. Imagine repeating the same story about 10 times, and each time increasing the number of Bahasa Melayu words. There will come a time when the whole story will be in Bahasa Melayu. The learners will be ecstatic after the last session when they realise that they understood the whole story in Mandarin.



# **Multi-voice storytelling**

Multi-voice storytelling is an effective technique that is widely used during language lessons. Here is an example of how to use this method during an English lesson:

When teaching an English class on descriptive writing, the teacher can tell a story about a girl who is cleaning her attic. Her mum wants her to get rid of most items, as she has outgrown them. However, the girl wants to keep everything. This story gives the students the opportunity to describe the emotions the girl was feeling as she was battling with herself about whether to keep or to give away her things.

The teacher then can carry on and build on the plot but also stop several times to ask the students to enrich the story with their own descriptions. The teacher can go on crafting and facilitating the plot until the very end and then allow the students to write down and express the ending that they imagine.

# Sandwich story creative writing technique

The sandwich story creative writing technique is very commonly used by teachers in both the science and arts fields. In this approach, a teacher first dictates a few lines to the students, after which the students add their own ideas. Below is an example of how a teacher can facilitate this approach:

### Dictate these first lines of a story:

Do you know why there is no ham in hamburger? Well, you'll soon find out. Long long ago, a German merchant made a trip down to Asia and noticed that the nomadic Tartars softened their meat by keeping it under the saddles. The motion of the horse pounded the meats to bits.

Ask the students to describe the process of softening the meat and the appearances of the horses and the locale. Give the students time to write about the whole scenario. When they have finished, ask them to please write what you dictate next and read the following sentence:

'The Tartars would then scrape together and season the mean for eating.

Ask students to describe the type of seasoning used, and give them a few moments to write their description. Then, once again dictate the next part of the story:

The idea of pounded beef found its way back to the merchant's home town of Hamburg, where cooks broiled the meat and referred to it as it as Hamburg meat. German immigrants introduced the recipe to the US. The term 'hamburger' is believed to have appeared in 1834 on the menu at Delmonico's restaurant in New York, but there is no surviving recipe for the meal.

Ask the students to describe what restaurantslooked like in those days. Give them time to write and then continue dictating the story.

The first account of serving ground meat patties on buns – taking on the look of the hamburger as we know it today – took place in 1904 at the St. Louis World Fair. But it was many years later, in 1921, that an enterprising cook from Wichita, Kansas, Walt Anderson, introduced the concept of the hamburger restaurant. He convinced financier

Billy Ingram to invest \$700 to create The White Castle hamburger chain.

Ask the students to explain what they know about the White Castle hamburger chain. Give them time to write the explanation and then continue dictating.

It was an instant success. The rest of the history, we might say, belongs to McDonald's. And, no, a hamburger does not have any ham in it. Well, it's not supposed to. Hamburger meat usually is made of 70–80% beef and fat and spices.

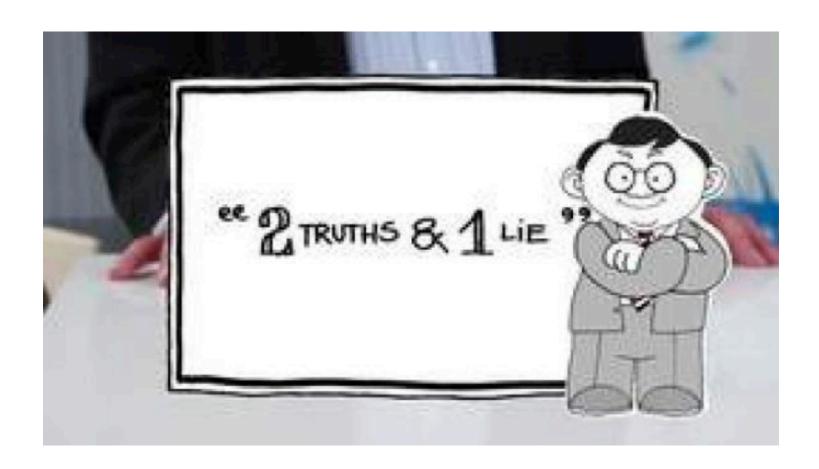
Lastly, ask the students to finish the story in any way they like. Then group the students in threes and tell them to read their text to their classmates (both the dictated parts and the parts they have written).

The sandwich story creative writing technique offers the following benefits:

- ★ The dictated parts are grammatically correct, as they have been dictated by the teacher. Thus, at least half of the story is written correctly.
- The other half of the text is based on each student's own free creativity and invention.

- ♠ Psychologically, the student appropriates the teacher's part of the story and feels that it his/her own because of his/her own creative input.
- **★** This technique helps boost the student's linguistic confidence.

#### Two truths, one lie



Another commonly used technique to engage students is called 'two truths, one lie'. With this technique, before stepping into class to give a lecture a teacher will think of two personal but interesting stories and one story that is completely made up. All three stories should be as believable as possible and narrated with the same conviction. The scenario would be as follows:

- ▲ After telling the stories, explain that two of the anecdotes were real life events, whereas the other one was a lie.
- ★ Divide the students into groups of five to decide which was the 'imaginary' story. Tell them they will have to justify their choice.
- ▲ After a few minutes in the small groups, ask students to present their views to the whole class.
- Take a vote on which was the fictional story.
- **★** Students tend to love lie detecting, especially when the teacher is the 'liar'.

# **Storytelling in science**

Some may think that is impossible to relate science and storytelling. However, science and storytelling have very much in common. To understand this reasoning, it is important to think about this very pertinent question: What is Science?

Science is an attempt to understand the story of the universe. A well-narrated story about science can bring facts to life, make abstract concepts concrete, and walk listeners through the process of scientific inquiry.

Science is full of amazing bits of intriguing information, also known as science facts. Students can get excited about these facts if they are presented in a tantalizing way. Formal education in Malaysia and throughout the world focuses an absurd amount of time teaching the names of things and the memorization of facts. In order to pass an exam these days, all a student needs is a good memory. Exams are no longer about testing one's intelligence. This premise brings us to the point that facts are important, and storytelling is one of the most effective ways of delivering them. However, if a teacher delivers only facts, he or she is not teaching science. Science should be a verb, an activity, rather than simply a body of knowledge.



Scientific concepts refer to theories, which are the big picture ideas such as the food web, evolution, the water cycle, and animal adaptation. These concepts are critical to the understanding of modern ecology. Teaching concepts builds the necessary conceptual framework for the ordering and understanding of facts, but science is more than this. It is something you do; it is a way of asking questions and seeking answers. Stories can make abstract theories concrete by allowing the listener to directly experience the concept. For example, the food web is not just an idea in a textbook; it is what you had for lunch.

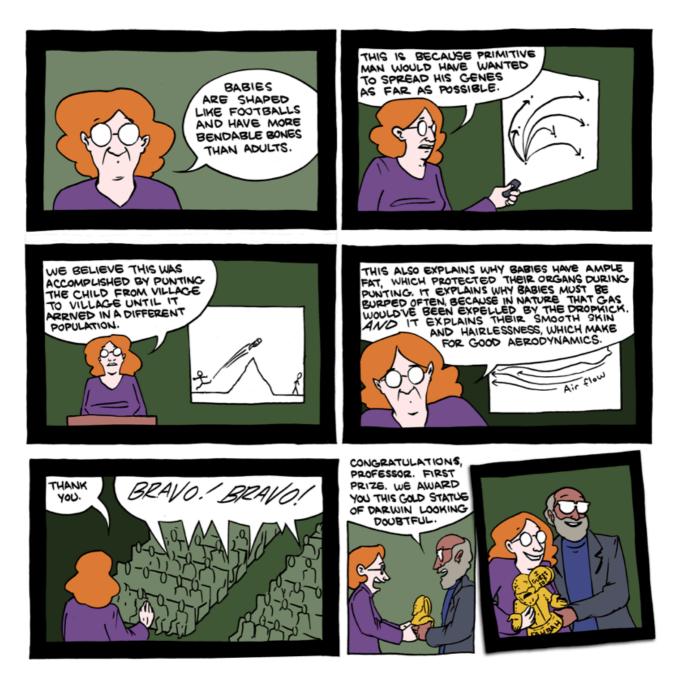
From when we are young, we are taught that scientific discoveries are made by asking questions about how things works. We then are taught to construct a hypothesis, design an investigation, collect data, analyse the data, and form a conclusion. These are the basic scientific skills one needs in order to comprehend the story of the universe.

This process relates well with storytelling. When a story is told, the listener plays a role similar to that of a scientist. As the audience listens to the storyteller, they are gathering facts from the story, forecasting the result, and scrutinizing their hypothesis as more details are provided. A good storyteller makes intellectual concepts personal and relatable, therefore allowing the facts to be remembered easily and to have a greater impact.

As teachers indulge in storytelling, they will see the fruits of their labour, particularly in the way that students interact and the responses they receive. Students will walk through the scientific process created by a story, and they might try to visualize themselves in the same situation. As the story continues, students will start relating to the storyteller or the protagonist of the story.

There are no limits to storytelling. If grounded in good science, personal stories, important discoveries in the history of science, evolution, and works of realistic fiction can be written or told to illuminate a concept, introduce a chapter, or prepare students for a science experiment. However, teachers need to push boundaries even further. They should create an environment for students that allows them to put what they heard into practice (e.g.,

take them on a field trip or ask them to design a research experiment and then take charge of it). The idea is to get students to explore various concepts on their own while the teacher monitors their progress.



When asked the motivation for pursuing a given field, many postgraduates say they were inspired by a certain professor. The best professors in the world are great storytellers. Take Professor Walter Levin, for example. Like in many of his famous lectures, Lewin performed a dazzling array of demonstrations jammed into 47 minutes — including a giant pendulum, on which he rode and broke a sheet of glass; a demonstration of light diffraction via cigarette smoke (which Lewin lit and smoked himself); and the creation of a "red sunset" on the projector screen, to demonstrate the polarization of light. His classes were always packed to the brim as he brought practical things to life, thus making him the most popular lecturer at the Massachussets Institute of Technology. Think about the scientists who have made the most lasting contributions to our understanding of scientific principles and the way things work; they have all been great writers and storytellers. Here is an example of how Professor Walter Levin engages his students during his physics lecture:

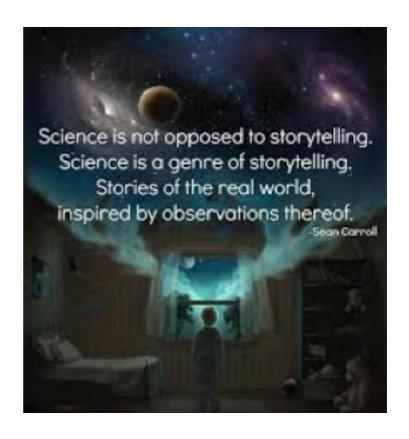
https://www.youtube.com/watch?v=PZHftbCf21Q

A good story will motivate students to become learners. Some of my fondest memories of the professors who taught me throughout my undergraduate and postgraduate years were great storytellers. Some would go to great lengths to explain the fermentation or production process but always relate the science back to an inspirational and interesting story. One of the keys to telling stories related to science is to remember that science should be a verb.

As an avid reader, I recently stumbled upon John Muir's 'Interview with a Bear'. In this story, the author wanted to prove the theory that bears were afraid of humans after hearing it from some friends. Off he went to Yosemite Valley in the US, and while trekking he came face to face with a bear. At first he tried to scare the bear away with various techniques, but in the end he was the one running for his life. His experiment failed miserably, but that did not stop his inquisitive nature, and he later became one of the greatest ecologists of our time.

Another good read is 'Silent Spring' by Rachel Carson. My 10 year old cousin read this book and then began asking questions. Carson's contemporary fable about pesticides and the absence of songbirds in the spring helped to create new laws and entirely altered our relationship

with the wild world. The story took readers inside the predicament of a pestilential environment and the future significance of what was then acceptable behavior. Her story, like the writings of Stephen J. Hawking, Stephan Gould, Annie Dillard, Aldo Leopold, and others, provide a front-row seat to learn about scientific discoveries. Through their stories, the reader can be a voyeur, looking over their shoulders as they fumble through their mistakes and stumble upon the truth. A good science story needs this sense of immediacy, this in-the-moment insider's view.



As a teacher, if you want to make your voice heard and let it ring in the ears of your students, write and narrate a story. Stories are like the glue that helps things and facts stick. So how does one write a good story? Start by thinking about some of the most passionate moments in your work as a scientist, researcher, or educator. The passion in your work will translate into a great story. Without passion, you would not be able to succeed. Next, begin building ideas for your main character, and consider how many other characters you need. Link the characters to what they are trying to understand and define their motivation for pursuing their quest. Pick a good and appropriate setting. Using all five senses, describe the place, the fun moments, and the exact location. Start building the plot. Add an element of surprise or mystery. Describe what you encountered along the way and what caused you to make the discovery. Were your efforts successful or did they fail? What did you learn during the journey? What could you have done differently? Relate all of this information progressively in order to reach the final conclusion. The various methods and techniques you use will lead to the long-awaited epiphany. To make sure the listener is engaged and emotionally involved in the story, stop at various points to ask questions about the students'

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points of view. Make them feel like they are part of your experiment or have them work in pairs and let them each tell the other their own hypothesis. At the end of the day, they will be able to grasp the idea, ask various questions based on the outcomes, and personalize the concepts learned.

In summary, the benefits of storytelling are endless. It is a form of entertainment for students, which will inspire them to be more motivated to take part in various activities organized by the teacher. It also encourages interaction in the classroom, especially when teaching English and other new languages. Students will not feel so self-conscious and shy when they are discussing topics with one another. Moreover, students' listening and speaking skills will improve tremendously as they move out of their comfort zone and narrate stories to their fellow classmates. Last but not least, storytelling is not restricted to students who are proficient in English; every student, regardless of his or her proficiently level, can participate. Hence, if the story motivates students to be active participants in scientific inquiry, you know you have a great story.

