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## Stories to motivate and teach

Jarrett D. Ragan Jr.

*People Potential, Malaysia*

Christopher Hoskins

*International Christian University, Japan*

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Story telling has been the preferred method of teaching since ancient times. It is still used in all societies as a way to help people understand the world. From the stories we hear and tell we learn right and wrong, and what is deemed useful and wasteful. In socio-cultural terms we construct our identity along with others in our society through the stories we tell. In neuroscience terms stories help us make patterns of neurons in our brains that are used to shape and control our behaviors, thoughts, and beliefs about what is possible and impossible for ourselves and for our society. The authors would like to share a couple of stories they use in the class and hopefully provide a fresh look at the power of stories to teach and motivate.

**I**n this article we will briefly discuss the power of stories for teaching and learning from historical, socio-cultural, neuro-scientific and complexity science viewpoints and how these might possibly be connected. Then we wish to provide the reader with two stories we have used to teach language in our classrooms and provide you with some questions to stimulate your own learning about stories and how they might be used to motivate the learning of and to teach this wonderful language called English.

Story telling has been the preferred method of teaching since ancient times. It is still used in all societies as a way to help people understand the world. From the stories we hear and tell we learn right and wrong, and what is deemed useful and wasteful. In socio-cultural terms we construct our identity along with others in our society through the stories we tell (Parkin, 1998). In neuroscience terms stories help us make patterns of neurons in our brains that are used to shape and control our behaviors, thoughts, and beliefs about what is possible and impossible for ourselves and for our society (Jensen, 2000).

Stories are probably as ancient as language itself. We can see evidence of this in the cave pictures of early Homo sapiens found around the world. These seem to tell stories of hunts, daily rituals, and gods. Imagine early man sitting around the camp fire telling about the close escape from death he had on the last hunt of the season, or an early woman describing how she discovered the sweet honey after watching a bear tear open a bees' nest and eventually lead the angry bees away as it left. These stories tell about life and instruct others who did not experience the particular story, but can relate to similar experiences he or she has had (Parkin, 1998). Education could have conceivably begun with the telling of stories in such a way. It is clear that a culture's "stories are about the wisdom of life.... It teaches you about your own life."(Campbell, 1991) Stories motivate us to live and learn as well as teach us how to live.

Fast forward in time to the first written stories we have from the Middle East, the creation stories that validate mankind, or the stories of heroes meant to instruct the young, such as those of David and Goliath or Gilgamesh and on to the ancient Greek's Odyssey. Of course there are similar stories from many cultures around the world (Parkin, 1998). In fact, this may serve as evidence that somehow stories are a part of human nature, possibly even hardwired into the human brain, not the particular stories themselves, but the pattern for stories. If this is so then we are born to learn from stories. This could explain why stories seem to be present in every human culture.

The parables of Jesus and the Zen koans each tell a story that instructs, motivates, and challenges the listeners to construct meaning from them to improve or at least measure

their actions and compare their own lives to some standard or norm, in other words, to learn how to live in the world. Each of us seems to attach different meanings to the same story, but somehow we all understand them to be teaching us at some level. (Simmons, 2001)

Socioculturally, thoughts, or in our case "stories," are dynamic and complex full of changing meaning and understanding depending on the experiences of the teller and listener. These meanings and understandings seem to be caused by our motivations which are the result of our desires, needs, interests, and emotions (Vygotsky 1986, p. 252). So our internal and external experiences affect our understanding and learning.

### Scientific perspectives

In a neuro-scientific sense these emotions, desires, needs, and interests come from the firing of neurons in interconnected neural nets that send messages throughout the various parts of the brain as we listen to a story through the medium of language and construct meaning and understanding from it. As we make it part of our memory and part of our internal monologue, we add our understandings and link those with the understandings of others around us. As Damasio points out in *Descartes' Error*, society, interpersonal interactions, and the neurobiology of the individual are working together to produce understandings and the behaviors that come from those understandings (Damasio 1994, p. 124).

Stories themselves are complex in that they are imbedded or nested in the culture and experiences of the humans that create, tell, listen to, and retell them in modified forms. They

are complex at the level of the grammar and vocabulary and the meanings they convey. They are complex in terms of the brainpower that is needed to produce, listen to, remember, and understand the stories at the neural level. The complexities of the interaction involved are beyond our imagination. Davis and Sumara (2006) state in their book *Complexity and Education* that all of these complex networks of societies, language and the brain itself seem to have similar structures. The same organizing principles seem to be at work in the physical and social world. That is to say they are nested, scale independent qualities like fractal forms and follow power law distributions rather than normal distributions. This means we do not know when the tipping point where we “get it” will happen, nor if the result will be the one we intended when we tell a story. This does not seem to matter for learning. Because learning is more creation than it is memorizing, we create our learning or understandings as we read, listen to, or participate in school or life. We create our own story, our own learning.

Davis and Sumara go on to say that neuro-science seems to indicate that the brain is radically contextualized with at least two categories: one learned by the species and the other by the individual. The brain does not seem to take in information as we commonly assume in our teaching and testing, but is constantly renewing and recreating its internal structure to fit in a similarly complex and self-renewing context. Stories seem to mimic this in their patterns with the constant repetitions and re-creation. Even if the above statement is less than all there is to it, it seems to us that stories are an ideal way to help the brain learn in the way it prefers to learn, to draw out the knowledge we already

have. In a recent article published in *Nature Neuroscience*, Sakmann and Mehta (2006) contend that contrary to what has been thought, the neo-cortex seems to control the communication between itself and the hippocampus during deep sleep. So it may be that the neo-cortex is drawing what it needs from the new information gathered by the hippocampus in the “old brain”. This supports statements made by Socrates and the ancient Greeks concerning education. We seem to draw out what we already know rather than put new information in. We create patterns in our brains and our brains seek out information that fits into our patterns.

Since stories are so popular and so often used to convey ideas and information it seems natural to the authors that stories would be useful in learning a language. Since we use language to tell stories and we all like stories that we can relate to, this makes stories ideal input for a language learner (Morgan and Rinvoluceri, 1983). With the above ideas in mind we now ask you to read the following story. Also keep in mind the questions we pose and see what you draw out. Think of your own professional life before and after reading the story. What lessons did you learn about yourself and your life? When and where might you use such a story? How could you change it to suit your purpose? How could you use it to teach a language?

### The Axe Story

Once there were two mighty lumberjacks who were always bragging about who could cut down the most trees in a day. The good-natured bragging had been going on for many years. One day while drinking with their fellow lumberjacks

one disagreeable fellow began to demand that they cut out the bragging and settle, once and for all, who the greatest lumberjack was. There ensued a big argument among the drinkers with some backing one and some the other. The two good natured giants tired of the bickering so they announced a contest to see who could cut down the most trees in a day. The contest would take place the following morning. As it was late everyone went off to bed.

In the morning the two lumberjacks arrived with their supporters. Each was given a stand of trees of roughly the same size and at 7 am they were allowed to begin. The first lumberjack, who was a man of action and always eager to get on with the job, grabbed his axe and began chopping on the first tree and soon the shout of “timber” rang through the forest.

The second lumberjack, who was more methodical and thoughtful, picked up his axe looked at the blade and ran his finger along it testing the edge. After doing so he took out his sharpening tools. He sat down and began to sharpen his axe. The first lumberjack was astonished at his good fortune. The second lumberjack sharpened and sharpened. The ring of steel on steel and steel on stone mixed with the sound of steel on wood, and the periodic cry of “timber” could be heard for two hours.

Finally the second lumberjack was satisfied his axe was sharp enough. During this time the first lumberjack had chopped down 5 trees and another was almost ready to fall. By the time the second lumberjack began to cut his first tree the first lumberjack was beginning his seventh tree. Through the rest of the morning they both furiously cut at the trees.

At lunch time the second lumberjack was still 5 trees

behind. After the short break for lunch the chopping began again. It seemed as if the second lumberjack had made a terrible mistake as he was still behind by 4 as it approached 2 o'clock. As the afternoon progressed the chopping pace of the first lumberjack did not decrease, but the trees were not falling as fast.

The second lumberjack kept at his steady chopping and his trees began to fall faster and faster. When the clock struck 7 pm both lumberjacks were completely exhausted. When the total trees had been counted the second lumberjack had chopped down one more than the first. His supporters were delighted. The others were stunned.

The first lumberjack came over to his exhausted friend and said, “when we started I thought you had lost your mind and by 9 am I was sure I would win but now I realize that the time you took to sharpen your axe made it possible for you to cut more efficiently and finally overtake me in the afternoon.” The two went away as good friends as ever and everyone had a new insight into their job.

Before you go on, reflect on what this story means to you. What did you learn from it? What connections did you make while reading the story? When would you use this story? How could you change it to fit a particular situation? How could you use it to teach language at the same time?

One lesson to learn from this story is to take time to prepare yourself and your tools before you begin a task. So this story might be used in a class or situation where students want to jump into a task that they are not yet ready to handle. Here they can learn the value of preparing well before beginning a task, as it will lead to better results. I am sure you can think of many other messages this story

can have which of course depends on the experiences of the listener, the immediate circumstances, and the skill of the teller. In other words many complex interactions are required in the brains of the teller and listener to process the story and create meaning from it. Of course, the culture of the people involved is another level of complexity that must be considered. And for second language learners, there is the added level of complexity in understanding any unfamiliar grammar and vocabulary the story might contain. So why can we learn from a story? It seems that we can do this because the “same organizing principles seem to be at work in the physical-biological world ‘the brain’ and the social-cultural world” (Davis and Sumara 2006, p. 49). The neural nets in our brains, the symbols or sounds and grammar that convey the meaning, the experiences stored in those neural nets and the cultural knowledge we all have seem to be organized similarly. So it seems to the authors that we learn most commonly and most likely best through stories.

A highly personal story can have a more powerful influence on the teller and listener. With this in mind consider the impact of the following true story by Chris Hoskins. What is Chris trying to convey to the reader? What pattern in your brain does the story fit into? Are these the same? Does it really matter?

### The Hose Story

As a teenager I worked for my stepfather as a laborer in his swimming pool construction business during summer holidays from school. At least two or three times during those years he fired me because of poor-quality work, or more accurately, lazy thinking resulting in poor-quality

work. These firings were painful because that job was my only source of money, and without that money my social life went downhill immediately and dramatically. No more dates, no more movies, no more rock music records, no more hanging out at the local Baron of Beef hamburger restaurant with my pals. That hurt, and so these firings caused me to think deeply about what I’d done to bring about the end of my summer employment.

The firing that remains most clearly fixed in my memory had to do with mixing cement. While the pools we built were above-ground vinyl liner pools, the supports for the pools were set in cement poured around their bases in carefully dug and leveled holes. Once the process of mixing the cement had begun there was no stopping, and timing was of the essence because if you didn’t get it right, the cement would very quickly harden and become a large, formless, useless and incredibly heavy blob. If you didn’t get it right, you had to clean up the mess and start the process over, which was expensive in time, materials, labor costs, image of professionalism with the customer, etc. So this cement mixing had to be done right and it had to be done quickly.

On the day in question, I was working slowly and desultorily on a hole in the ground for one of the pool supports when my stepfather called to me from the other side of the construction site where he’d started to mix some cement. He shouted at me, “Chris, get me a hose!” So I grumpily climbed out of my hole, looked around, located a hose coiled up on the ground, grabbed it, brought it over near where my stepfather was getting the process of mixing concrete started, threw the hose on the ground, and went back to my hole.

Within a few minutes my stepfather called me over again, but this time he wasn't just brusque and in a hurry, he was angry, and he was angry with me. "You idiot!" he yelled. "I needed water! Why didn't you hook up the hose! Damn it, I can't use stupid people. You're fired!"

I looked at what was going on around me and immediately realized that, yes, what he really needed was a hose that was hooked up to a faucet and would bring water to the cement mixer, not just a hose unconnected to anything. I also noticed that the cement he'd been mixing using water from some buckets was now a large, formless, useless and heavy blob because I hadn't provided him with the additional water he needed at the time he needed it. The cement mixer had to be cleaned as best as we could, the whole process had to be started over, and the other small jobs that could have proceeded from that point had to be stopped and the workers idled while the cement mixing and pouring caught up with everything else.

To have engaged my mind just enough to notice what was going on around me at the time he asked for the hose, and to think even just briefly about why he was making that request would have been enough for me to see that it wasn't only a hose that he wanted. He was saying, "Bring me a hose with water coming out of it so I can continue mixing this cement." I was too lazy to spend the few seconds it would have taken to listen carefully to what he was saying, assess the situation adequately and respond appropriately. This laziness cost my stepfather more money and aggravation than I was worth, and so I was fired.

The next year, since my stepfather didn't want me loafing around the house during the summer vacation complaining about being bored, he decided to give me another chance

working in his pool building business. This time I was prepared to change my on-the-job working habits. I developed the habit of mentally repeating exactly what he said to me, looking carefully at what was going on at the time, and making a determination of exactly what he wanted, all within the shortest span of seconds I could manage. And then I jumped to it as fast as I could without hurting myself or anyone else. I never got fired from that job again.

Again, ask and answer the questions from the axe story about this story. Also consider these questions. Does knowing that this is a true story make a difference? If so what is that difference? What does this all mean for using stories in the language classroom? How can we use stories to help our students learn language more enjoyably?

### A call for using stories to teach and motivate

The authors would like you to consider all the complexities involved in processing a story and the possibility, even the likelihood, of the listener or reader not getting the intended point. The authors would also ask you to consider the fact that the intended point notwithstanding, the true value of using stories in the language or any classroom may be that the learner is in control of what they get out of the story. Learners decide what they think is important and create meaning by comparing it to their own stories locked away in their neural nets, and much of this happens at the non-conscious level. At the same time they are learning the language we are diligently trying to teach them. We believe stories are a truly student-centered way to teach. Please use the two stories we have provided. They have worked for us. We believe they will work for you and your students.



In our workshop we had the participants share their own stories that teach and motivate. We hope that you all have stories that you would like to share with other teachers that may be useful to our students. If you do, please send them to either of the authors for eventual publication at the email addresses at the end of the article. Help us spread the *memes* of storytelling for drawing out the knowledge we all have within us as we teach our students English.

**Email:** jadaragan@yahoo.com, choskins58@yahoo.co.jp

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