The Neuroscience of Stories and Why our Brains Love Them

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Stories are magic. Our brains love them. We process the information they offer with less effort and retain it longer. But why? This paper will examine the power of stories, offer theories in neuroscience as to why, and the look at various techniques for using them in your classroom.

1. The Power of Stories

Imagine two formats for information delivery: stories versus explanations, or narrative versus expository. We absolutely need both, but it seems our brains greatly prefer the narrative. There is something about the narrative format that causes the brain to retain more information from stories and remember it longer. Let us look at a little bit of the research saying so.

Oaks (1995) compared retention from traditional lectures to storytelling. Testing listeners right after hearing the lecture or story, 3 weeks later and, 5 weeks later, he found that even after five weeks, about twice as many people in the group hearing the stories still remembered the key points. Berkowitz and Taylor (1981) found children recalled significantly more information from the narrative passages than they did from expository passages with similar content. George and Schaer (1986) found kindergarten children's recall of prose content was significantly higher when given by storytelling than other means, including television!

In 1980 three researchers from University of California, Graesser, Hoffman and Clark, compared the memorability of narrative texts (such as the story of Noah's ark) and expository texts (such as an encyclopedia entry for armadillos). Twelve texts were rated by the college

students for their narrativity, familiarity, and interestingness. The narrative texts were read about twice as fast as the expository texts, yet the narrative texts were remembered twice as well as the encyclopedic texts. There was a high correlation between narrativity and the amount of information recalled (0.92) yet familiarity and interestingness had a very small effect on both reading time and amount recalled.

Stories can also be actively used by learners to increase retention. In 2013 psychology professor, Dan Johnson, of Washington and Lee University, found students making nano-narratives to remember abstract concepts, with just just two or three lines of information, had improved recall over several days. Bower and Clark (1969) at Stanford asked students to memorize and recall ten sets of unrelated words. One group was told to memorize the words any way they wanted, while the second was told to make stories using the words. The story group was able to remember six to seven times as many words as the naturalist group. Higbee's study (1977) found similar results, with 2-7 times the recall in the story group. The results? In the worst case, students using stories only remembered twice as many words.

Granted, word recall with native speakers is not exactly the same as EFL vocabulary learning, but as far as the brain goes, it is close. The worst participants in Higbee's study only remembered twice as many of the words as the other group (1977); only *twice* as many. Any EFL teacher would be utterly delighted if he or she could increase vocabulary retention by 100%. And yet, it is unlikely any of us are using this method to increase retention. I certainly do not. So the question is, why isn't anyone taking advantage the huge retention efficacy stories give?

Someone is, though, and to an amazing degree: the advertising industry. The sole purpose of those dozens of TV commercials you see everyday is to get you to remember the product name, the brand, not even consciously. Then later, when you go to the store to buy a detergent, without even knowing why, you pick up the target brand. Advertisers know that getting your brain to release dopamine at the same time you see their product name builds the brand. Causing dopamine release through a moving story, the neurotransmitter responsible for drive and reward, has a memory effect. Dopamine also causes deeper learning. Our brains are built to remember things that make us feel good.

So, advertisers use the movie stars you love, the men in expensive cars, the women in sexy dresses; they use creamy chocolate, the 50% off, and any other way they can to get you to

release dopamine. Then too, one of their favorite methods, even in a ten-second commercial, is to use a story. They know. Stories result in deeper learning.

You can find hundreds of advertisements using stories on YouTube, but I suggest you look at one in which Google advertises their search engine. Search "Parisian Love Google" and watch. The ad has no explanation, just a story, and yet it advertises all the search engine functions.

> Google didn't advertise on television until it unleashed this spot during the Super Bowl. The ad expertly explains some of the lesser-known features of Google—like the ability to pull up your flight status by searching with the flight number–in a beautiful, tear-producing story told purely through search strings. What award-winning ad agency legend put it together? Five young Google recruits. The clip originally went online, until someone thought to air it during the Super Bowl. (Rayman, 2014, p. 4)

Watch it twice and you might get teary eyed. But why is that? That probably would not happen if you heard the same explanation twice, but it worked in this case because of the neurotransmitter release. You were wrestling with the cognitive load and language processing the first time through. You can get more into the emotional side (the narrative) the second time through. Again, this is what advertisers do to your brain. They cause the release of neurotransmitters, especially dopamine. With giggling babies, with romantic couples, with awesome food, they cause dopamine release, the neurotransmitter of reward, and they make you learn their product.

Well, if Google can do that, then I ask, why can't we?

We are not as limited to something as mundane as a search engine. We have the whole world to draw from. Even if we have to present in a limited set of English, we still have the world. There is so much evidence supporting the use of narratives to increase classroom learning, and yet, we hardly use them.

Other academic fields occasionally use stories to enhance memory: Who discovered gravity and how? Where was Archimedes when he discovered a way to measure volume and what did he cry? Who was the young genius who supposedly failed math in grade school (a myth,

though)? How did Julius Caesar die? How did some Dutchmen get Manhattan Island, which later became New York, from some Native Americans? By comparison, I doubt you know how Boyles Law was discovered, and maybe not even by whom? (That was a joke.)

Or maybe we do use stories to enhance memory. One of the greatest changes in language teaching in the last 20 years has been the spread of extensive reading. Its advocates have long said ER causes language learning because a) it is comprehensible, b) it builds automaticity c) and it increases learner exposure to the language (Richard Day, personal communication, 2004). They might also add, as an aside, that since reading is pleasurable, students are more likely to keep doing it. Neuroscience paints a different picture. After all, most of what language students do is comprehensible, builds automaticity, and increases exposure to the language. Instead, what makes ER particularly effective is that our brains are built to remember information in the narrative format, and even more so if it arouses emotion.

Stories are brain compatible. But what exactly does that mean? Again, we must turn to neuroscience. However, before we get into the neuroscience of stories, let us look at a story and valuable technique for the EFL classroom.

2. A Special Story and Special Technique

Stories are usually delivered orally, but this one is not. It is what is called a Digitale, an English teaching technique developed by Hawaii-born, Rex Tanimoto, at Osaka Gakuin University. A Digitale is an extremely simple technique for teaching English. Students make a story and do it in PowerPoint. They write one or two sentences per slide, add illustrations. When finished, they show and read their stories to other students. It takes the oldest educational technique in the world, stories, and delivers them through one of the newest, PowerPoint.

It is especially suited for the language classroom, because it uses multisensory input for both expression and comprehension. Since learner listening comprehension skills usually lag behind their reading skills, the stories their peers tell are far more accessible.

Figure 1 shows a Digitale made by Rex's college students, and in fact, it was the first one he ever showed me. It is called "Love at First Sight." Try not to laugh. This story might seem a bit simplistic and stereotypical, but it was special for the students that made it. They were not studious and highly motivated types, but equipped with a digital camera and a good sense of

story, they made a product, in less-than-loved English, that moved others to tears and laughter. What more noble end could a teacher pursue in an English class than making learners able to move others to tears and laughter in English?

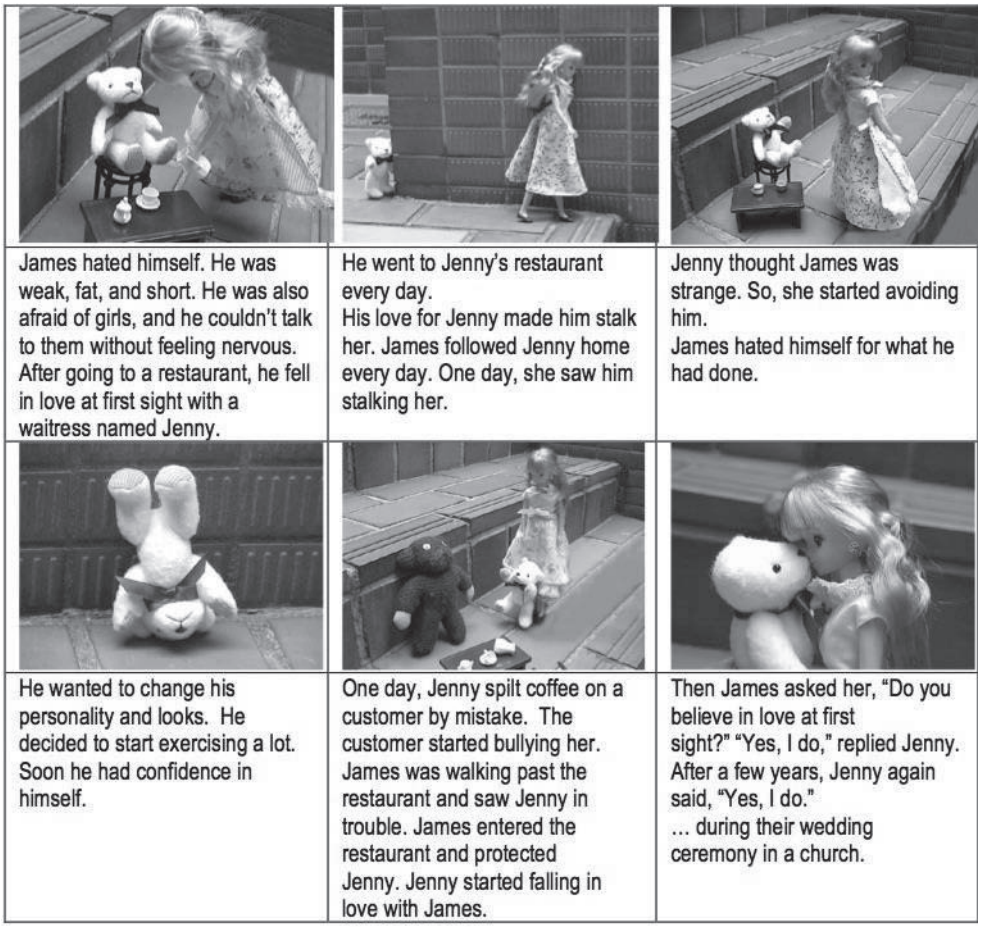

Figure 1. Digitale 1: Love At First Sight, by Yuki Yasuda, Akiko Nishimura, & Akiko Tomori (Note: original English edited, and only about half the photos presented)

This Digitale was not exceptional; it was just the first one I saw. Others (see Figure 2) were funny, inspiring, and thought-provoking too. Like "Love at First Sight" they also meant so much to the learners who made and shared them. Rex's Digitales seemed to offer great potential, especially in an age when English teaching tends to be so dull, mechanical and constrained. Control is too often our main concern in the English class. Yet here was a method that used language to release learners. When I saw it being used, I thought it was

going to be the next big thing in Japan, and I was ready to commit to it. It turned out not to be, for reasons I will explain later, but first I would like you to ponder the benefits of this technique.

Figure 2. Addition slides from Digitales presented at the 2003-2005 Storytelling Festivals, Osaka Gakuin University

3. The Shift to the Left

Digitales. So simple. Yet, it might be more useful than you think. Now in our sphere of English teaching, we're experiencing this constant shift to the left. By shift to the left I mean this: A shift towards input instead of output. This is happening because of what is becoming increasingly important in our field, tests. We are right in the middle of the age of psychometrics: measuring ability by multiple choice test scores. To get into a good junior high, senior high, or university, you must pass these tests. Then think about TOEIC, Eiken, and IELTS. These are tests that just measure input skills – listening and reading comprehension – not output, and yet these scores are critical to getting a good job after graduating.

As a result, English departments all over Japan are teaching more and more input-oriented English: listening and reading. There are whole departments that measure English proficiency merely by input abilities. There are English departments who sell themselves by promising to raise TOEIC scores by 200 points. Now we language professionals know that there is more to proficiency than just multiple choice scores, and so do the TOEIC, IELTS, and EIKEN people. That is why each of these test groups has recently released speaking and writing tests. Output tests…that no one takes.

Unfortunately, those who shape policy are not language professionals. They are academics, employers, parents, and the students themselves, and they want numerical scores.

And maybe there is another reason for the shift to the left too. Output is difficult to teach. How many times have you taught a speaking class where there are more students speaking Japanese than English? You have so little control over output. It is messy. So the shift to the left is a also way to keep order.

Nonetheless, the shift is causing problems: we are increasing moving into systems that reward passive learners, or systems that reward analytical instead of relational learners. Of all the learning styles I have read about, analytical and relational learning styles (Anderson & Adams, 1992) were the most interesting. Analytical learners, the engineers, are good at remembering details; they are good at taking tests; they like to study by themselves; and they are motivated by scores. Relational learners are more global, more intuitive, and maybe more creative. They are good at understanding the whole rather than the details; they are terrible at tests; they like to study with others; and they are motivated by relationships. They are smart, but they are not very good at memorizing facts, and so, they tend to do poorly on input-oriented proficiency tests. The shift to the left is working against them. Education is increasingly failing them, unless, you do Digitales.

4. Advantages and Disadvantages

When Rex started doing Digitales in class, it was much harder than now. Not many students knew how to use PowerPoint. They didn't have easy access to digital cameras or computers. These were disadvantages back then, but in this day and age, they are greatly reduced. Almost every student above high school year one has PowerPoint skills and most have digital cameras and computers right there in their pockets. Doing Digitales now is far easier than it used to be.

So, what are the advantages? In addition to being fun, comprehensible, multisensory, and in most cases cute, there is another advantage I would like to look at, efficacy in learning. For fifty years neuroscientists psychologists and educators have been studying why narratives are better for learning than other techniques.

5. The Neuroscience of Stories

One advantage stories have is their ability to elicit emotion. We have long known emotion and learning are deeply connected, and also that emotion and cognition are not separate. Neuroscientists like Pessoa tell us emotion is a form of cognition (2013) and all cognition uses emotion.

Stories that arouse your emotions, like the Google ad, do so through through the release of three important neurotransmitters: a) Dopamine - the neurotransmitter of drive, reward, and deeper learning; b) Cortisol, the stress hormone that causes greater focus; and c) everyone's favorite, Oxytocin, the neurotransmitter of bonding.

Neuroscientist Paul Zak (2015) has been doing amazing research on cortisol and oxytocin release caused by moving stories. He found that touching stories cause the release of both, resulting in greater attention, more sympathy, and changes in attitudes. Zak found that after seeing a touching story, because of the oxytocin, people were more willing to give money to strangers in need, or charities. He also discovered that just watching a video of characters going through a random series of encounters, as happens when one takes a walk, did not have the same effect. So there must be a particular structure for these neurotransmitters to be released, a structure you know. It is the arc of the rising action, climax, and falling action that all stories are made of.

So why does the format of a story, where events occur one after the other have such an impact on our learning? The answer is that because we are wired that way (Widrich, 2012). "A story, if broken down into the simplest form is cause and effect. And that is exactly how we think. We think in narratives all day long, no matter if it is about buying groceries, whether we think about work or our spouse at home. We make up (short) stories in our heads for every action and conversation" (p. 1). If I do this, then I hope to get this result. This is an unconscious, uncontrollable process, even when we are asleep.

The brain is a prediction machine, a view gaining strength in neuroscience. In fact, according to Daniel Schacter at Harvard (2012), the sole purpose of memory is to allow us to predict what will happen next. That is why we are not good at remembering details. Amalgamated gist memories work better for predicting than a plethora of exact memories. The brain is a simulation machine; we see a cause and simulate the effect.

Cause and effect: it is how we think, which brings us to the most interesting language theory of our age, one with crucial implications for our field. It is called embodied simulation. Neuroscientists have long wondered how memories are stored. Is our brain a filing cabinet? Are memories a collection of old movies and photos? And how about language? Do we have an internal dictionary we use to define every word we hear? The answer is "no" for all of these. We now believe that that our brains use the same networks to do four things: to

process incoming sensory information, to store memories, and to predict what will happen. And to do one more thing: to make meaning from language.

The networks that do this are our sensory and motor cortices: our visual cortex, our auditory cortex, our motor cortex, our olfactory cortex and our somatosensory cortex that controls touch, and so on. So, when you see a photo of Justin Timberlake in a magazine, your visual cortex fires up and does all the visual processing, recognizing that visual input as representing a male, a human, etc. Memories of seeing him before, stored in the same visual processing area, makes you realize who he is. You cannot hear him singing, but your auditory cortex fires up anyway with memories of what he sounds like. As you form this representation, your motor cortex might make networks holding and controlling your throat and voice muscles to fire.

The exact same thing happens if you just hear the words "Justin Timberlake" (and maybe the visual image networks for "timber" and "lake" fire briefly too, but then fade out). And if the speaker goes on to say "Justin has a velvety voice" the sensory area in your brain for fingers and the feel of velvet will fire too (Widrich, 2012). So, rather than just looking words up in a mental dictionary, we are simulating. To simulate, we are use the same networks connected to our sensory mechanisms, which is why we call it embodied simulation.

So, with the new understanding that our brains are cause-and-effect simulation machines that use the sensory areas of our brain to process the world, it should be easier to understand why narratives are more brain-compatible than explanations. Narratives are cause and effect. Stories are sensory. The data in them are already in the "right format," so to speak. In contrast, when we hear or read an explanation, we have to do a lot of translating to get the information into the narrative cause and effect format that our brains understand. It is harder for our brains to figure out what the explanation means and what previous experiences it relates to.

Other researchers have been exploring how our personal identities are made up of stories. Jeremy Hsu found: "Personal stories and gossip make up 65% of our conversations." In fact, they represent a code of not just who we are, but also who we wish to be. Everyone is living one movie or another.

Living a movie. Maybe the true value of stories lies in something the great biologist, EO

Wilson once said, "The stories we tell ourselves and others are our survival manuals" (2002). Stories are encapsulated experience. They help us hone our social skills. Mar And Oatley reported in two studies that individuals who frequently read fiction seem to be better able to understand other people, empathize with them and see the world from their perspectives.

Fiction, Dr. Oatley notes, "is a particularly useful simulation because negotiating the social world effectively is extremely tricky, requiring us to weigh up myriad interacting instances of cause and effect. Just as computer simulations can help us get to grips with complex problems such as flying a plane or forecasting the weather, so novels, stories and dramas can help us understand the complexities of social life" (2008, p. 42)

The success of our species is mainly due to the way we have made these manuals of encapsulated experience transferrable. Uri Hasson from Princeton examined someone telling a story and someone listening, and found something amazing. Their brains linked up (Widrich, 2012).

The person telling the story, reliving a personal experience, would have different areas of the brain firing up as she told it. The brains of the listeners started doing the exact same things in the same order. When the teller "had activity in her insula, an emotional brain region, the listeners did too. When her frontal cortex lit up, so did theirs. By simply telling a story, the woman could plant ideas, thoughts and emotions into the listeners' brains" (Widrich, 2012, p. 1) In other words, stories allow us to link brains and pass on our rich experiences.

6. Digitales as Tools of the Brain

And therein lies the beauty of Digitales. They are stories, multisensory, totally comprehensible, and emotion-arousing. Year by year, they were growing in popularity. They were the perfect technique for high school students, so Rex Tanimoto started going around to Suita City high schools doing workshops. Digitales caught on. Osaka Gakuin started holding Digitales Festivals and they were a huge hit.

One reason is that they were not boring. If you have ever been a judge at an English speech contest, then you know how hard work it is. After 15 presentations, your mind is numb, and so are those of all the students present. Painful. Digitales festivals were not like that at all. The visual effect made them accessible and interesting to everyone who was there. I remember being surprised at how fresh I felt after four hours of watching Digitales, and I

actually wanted more. The pictures and words on the screen made them so much more accessible.

And so Digitales was growing. There were 900 entrants to last festival we held and that was just in Suita City alone. Nara Kyouiku Iinkai got interested too, and asked Rex and I to do Digitales workshops at their Super English Tomigaoka High School, a special high school designated by the Ministry of Education to make an innovative English program. Indeed, I could see Digitales going national and we were just on the point of doing so, when, as I said, something happened.

It was a Friday. Rex and I were supposed to do a workshop at Tomigaoka Selhi. Rex called me up that morning and said "Curtis, I was out skin diving yesterday and I think I caught something. It feels like the flu. So can you do Tomigaoka by yourself today?" I said, "Sure." It was not hard. Doing a Digitales workshop just meant telling them to write stories in one 45-minute class, and then to read them to each other in the next. So I did the class and called Rex a couple days later. I told him it all went well, which he was glad to hear, and then he said he had something to tell me. He said, "I went to the doctor and it is not the flu. It's cancer. Lung cancer."

I just couldn't believe it. Rex was one of the fittest guys I knew. He exercised every day. He did not smoke. I tried to tell him it was a pulmonary embolism or something, but it wasn't. It was lung cancer, stage four. Well, we tried to make the best of it and even started a rumor that he wasn't sick at all, but just skipping work. Unfortunately, Rex didn't last long. He left us, and without Rex, all the steam went out of Digitales. I did not want to do the workshops. I did not have the heart to run the festivals. I did not want to take it national, not without Rex. So, Digitales died too.

Until now, that is. Two things happened, and both happened in early 2015. One is that the Pan-SIG conference organizers asked me to do a plenary on storytelling. And how could I talk about storytelling without talking about Rex and Digitales? That presentation and the offshoots, including this paper, gave me the chance to reflect on and share Digitales. The other is that, after about ten years, I was asked to actually teach Digitales again.

One of the teachers involved in our work in Nara, Hiroshi Izumi, was now working in another Ministry specially-designated "Global" high school, Unebi High School in Nara

Prefecture. He was in charge of making the English program, and he asked me to come and teach Digitales. I did so not long before the Pan-SIG event and it was great. That experience reminded me how good Digitales are.

That led me to rediscover some of the wonderful things about this approach. There is something inherently uplifting about a student making a story in English and sharing it. They are doing, not just hearing and reciting. There is something inherently uplifting about entertaining others, no matter how weak your English is. The learners, weak and strong, become the givers instead of the receivers. In a small way, it is entering the adult world for them. And this brings us to the real value of Digitales: It has no real bias in terms of language proficiency.

It is not the best language speakers that get the accolades, it is the most creative, the most visual, the most devoted, no matter what their TOEIC score is. This puts English back in its proper place, not to be a goal in itself, but to be a conduit. As Mark Pagel said, "Language is the voice of our genes" (2011).

So this is what Rex gave us: a superb, brain-friendly way to teach output that is full of Aloha. In fact, that is just what our own Nathan Furuya said about Rex at his memorial. "He was a guy with aloha from the top of his head to the tips of his toes." I have lost a lot of friends and family over the years, but I think it is Rex I miss the most. And there is no way I could do a presentation or article on storytelling without bringing the master in. Thanks, Rex.

7. Using stories in the classroom

You might or might not be able to use Digitales in your class. After all, there is a fair amount of overhead. Nonetheless, there are other ways to use stories. Having students write or tell their own personal stories is effective. Another technique that lets you utilize stories without any change to the curriculum is just to tell a story at the end of class. If you have an extra five minutes, tell a story. You don't need to tie it to vocabulary practice, comprehension questions, or quizzes. As learning tools, good stories drive themselves.

A story at the end of class can be amazing. When you start telling a story, especially one that fits their moral development, the otherwise noisy class falls silent, eyes turn towards you, everyone listens intently. Why? Because good stories are good for them, and intuitively they know it. They are good for them in a deep way. Stories touch their hearts and souls. Telling

stories, the manuals of life, help them grow in areas they intuitively know are crucial.
Everyone listens. That is, everyone listens if you follow two general rules in regard to storytelling. The first is to choose a story that fits your audience, and the second is to use storytelling techniques to deliver it.

7.1 Choosing stories that fit the audience

Good story choice does not mean just getting the language level right. It also means getting the story right, finding one that will impact learners emotionally. As was discussed earlier, stories are life manuals. Therefore, the basic message of the story should speak to the problems of your learners. They must be able to identify with the story, but do not take that too literally. They do not have to be able to identify with the external characteristics such as setting and society, as in Shakespeare, as long as the internal conflicts or ways of resolving them are relevant, again, as in Shakespeare.

Finding stories to use with children in class is not so hard, choices abound, but for younger and older adults, it gets difficult. There are many long stories, such as novels and movies, but short, five-minute stories you can tell in class is not as prevalent. Some teachers use folktales for this purpose, but in my experience most folktales are life manuals for a completely different kind of human existence, and their moral messages have little relevance to our world. The messages tend to be "the forest is dangerous," "obey your elders," "don't trust people not in your clan," and "know your place."

There are exceptions of course, and some old stories hold just as power now as they did hundreds of years ago. These include the old Welsh story of Llewelyn and Gillett (modern spelling) in which a prince kills his friend in anger; the Greek love story of Helen of Troy; or the Japanese story Momotaro that teaches us the group is stronger than the individual (in contrast, America's *Die Hard* movies give the opposite message).

Developmental psychologists say the greatest sociological task teens and young adults face is what is called moral development (Murphy & Gilligan, 1980), an understanding of right and wrong. It is something they need to accomplish in order to move away from their caregivers and become independent adults. As a result, teens feel a strong need to consider their values, solve their own problems, and learn how to treat others. The *Love at First Sight* Digitale that we saw earlier has all three of these dilemmas. Therefore, stories like this, that touch on, and thus aid, their growth towards autonomy, are the best kind to use.

Stories about love, either romantic or platonic, always work. Teens' strong devotion to their friends, where once it was family, is part of their emerging from the cocoon. Their interest in stories that define romantic love are also powerful because, well, they desperately need that particular manual. Stories about power, seeing the world differently, and conflicts also work well, especially if the stories reveal internal strengths. And stories about understanding, kindness, and helping each other are always well received, because they model the way young people want to be themselves. You can find many such stories on the Internet or in books. The *Chicken Soup for the Soul* series (Canfield, Hansen, & Frontera, 2007) is my favorite.

For adult learners, looking at their developmental and sociological challenges also works, such as stories about marital relationships, perseverance, tolerance, and social change; in other words, the kinds of stories you like too. For working people, stories about the challenges business leaders overcame are effective, such as stories about Steve Jobs (Apple), John Marriott (Marriott Hotels), or Anita Roddick (Body Shop).

Again, the key is choosing a story that fits their challenges, and these challenges change according to age, gender and sociological situation. Let me give you an example. I once gave a presentation on storytelling to an elderly group of Japanese. None of the stories I told, which had been previously successful with college students and working adults, seemed to get much reaction.

I decided to switch in a different story about an elderly woman with Alzheimer's instead. Every day, the old woman lay immobile in her bed, unable to talk rationally, but often, she knocked on the wall. A doctor noticed this strange behavior and decided to investigate. He discovered that on the other side of the wall was another bed, and in it, her husband. They entered separately and the hospital not notice that they were a couple. They were spending their last days so close to each other, but so far away. The understanding doctor moved them to the same room and she never knocked on the wall again.

On telling this story to my elderly audience, there was a noticeable change in the room. At least seven people had tears in their eyes, and two had to leave. That was not what I expected, and I am still not sure I should have told that story, but it shows the power of relevance.

7.2 Storytelling Techniques

Telling a story is not the same as explaining or reading, and requires the techniques good speakers use in presentations. In general, listening is a lot harder than reading, so reduce the cognitive load as much as possible. Here are some ways to do so:

1. Use spoken, not written English. Written English sentences use far more complex wording you must keep the totality of in working memory in order to process meaning: like this very sentence. It is easy to understand if you read it, but a lot harder if someone reads it to you. Spoken English is simple. Spoken English repeats. Sometimes it's a sentence. Sometimes a phrase. Easy. Clear. Like this. So do not read or recite a written text. Change it to speaking.
2. Adapt the level to fit the audience. For lower level learners, I stop every few paragraphs and give a short summary (not full translation) in L1. This way, I know they will be on line for the next part. Sometimes I give the entire story again in L1 after I finish. It also helps afterwards to point out, or let them decipher, the moral message of the story.
3. Help the audience visualize the action. Use sensory words, voice change, and gestures to dramatize the delivery. This allows the audience to spend their mental resources focusing on the message rather than the language. For example, if your story includes an interaction between an adult and a child, use dialog – meaning direct quotes instead of indirect quotes. Change your voice a little for each character (making them different from the narrator's voice), and as you speak their lines, face a little to the right for one character and to the left for the other, as if they are talking to each other. For narration, face forward.
4. Use drama. Voice changes, phrasing, and long pauses –and I mean looooong – before key points builds the suspense. Voice change means changing your speed, volume, pitch, and tone every few sentences so that the audience does not lose focus. Our brains are built to focus on change, not continuity. It might seem paradoxical, but for the most powerful part of the story, a low, slow, quiet voice usually works better than a loud, powerful one.

8. Conclusion

Stories are a powerful technique for teaching. You can have your learners make and share their own stories, or tell them stories yourself. You can use the oldest means of information transfer, oral delivery, or the newest, digital delivery. Since they are life manuals, our brains

are built to process stories more quickly and retain the information in them longer. Stories are magic, and there is probably nothing more that the EFL classroom needs, than a little magic.

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The Neuroscience of Stories and Why our Brains Love Them

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Abstract

This paper offers some neurological explanations of why stories are so appealing to human beings and offers a glimpse at methods used to encourage story writing among university students.

Keywords: storytelling, brain science, digital storytelling