論文

Stories and Foreign Language Learning
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The power of stories used for educational purposes has been recognised throughout history. It is power that draws on some of the most basic elements of the human experience: the desire to make sense of the world; the impulse to share experiences with others; and the extraordinary influence of emotions over our lives. This paper will attempt to document the impact of stories on the human mind, to explore their connections to learning, and to suggest uses for stories in the foreign language classroom.

The Power of Stories

The use of stories to transmit knowledge has deep and far-reaching roots in human civilisation. A cave painting from the Indonesian island of Sulawesi shows the story of a pig and buffalo hunt. It has been found to be around 44,000 years old (Aubert et al., 2019). Religious knowledge, the oldest and longest-lasting kind of knowledge we have, is often encoded in stories: whether it be the stories of the Old Testament, the epic tales of the Hindu classics (Dutt, 2017), the riddle-like stories of Zen Buddhism (Senzaki, 2010), or the parables of Muhammad (Turan, 2011) or Jesus. The common sense needed to keep people safe has often been passed from generation to generation through the use of children's stories with clear messages, such as "Do not go into the woods alone" or "beware of things that are not what they appear to be." Indeed, when a group of engineers, anthropologists, nuclear physicists, and behavioural scientists were tasked with finding a way of warning people up to 10,000 years into the future that certain places, where nuclear waste is buried, are lethally dangerous, they recommended encoding that information into stories and establishing a "nuclear priesthood" of storytellers to pass them on from generation to generation (Human Interference Taskforce, 1984).

The use of stories in education, both formal and informal, is also well-documented. It has been called the oldest form of education (Gottschal, 2013). Fables, stories with an explicitly didactic message, have been a means of education all over the world (see Usbourne Publishing, 2017) and were passed on orally long before they were written down (Harrison, 2016). The last third of the twentieth century saw a plethora of studies confirming the efficacity of storytelling in a variety of educational settings and for a number of subjects: with learning-disabled children (Garnett, 1986); for learning

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mathematics (Borasi et al., 1990); science (Marin & Miller, 1988); psychology (Corey & McMichael, 1974); and language arts (Peck, 1989); as well as a number of investigations linking storytelling and pedagogy in general (eg. Egan, 1989; Halpin & Halpin, 1982).

It is no surprise, then, that stories have also been used to good effect in foreign language teaching. Morgan and Rinvolucri's *Once Upon a Time: Using Stories in the Language Classroom* (1984) both inspired a generation of teachers to share stories with their students and provided activities for doing so, a tradition continued by such publications as Wright's *Storytelling with Children* (2009). The well-documented success of Extensive Reading programmes around the world (Nation, 1997; Ng et al., 2019; Tien, 2015) and consequent availability of a large number of graded readers, both fiction and non-fiction, from major publishers, can be largely attributed to the popularity and effectiveness of using stories as a way of learning a language. Nishizawa et al. (2010) for example, found that high school students who participated in a four-year Extensive Reading course showed gains on the TOEIC test equivalent to those of classmates who had studied abroad for a year. Beyond the world of Extensive Reading, in a literature review, Lucarevschki (2016) documents a wide range of specific skills, as well as general language proficiency, which show significant improvements as a result of the use of stories in language learning.

Why?

It is becoming clear that the remarkable power of stories to support and enhance learning has its roots in the fact that they play to many of the strengths of the human brain when it comes to learning. They evoke emotion, a prerequisite for learning; they always have an element of sharing, which draws on the brain's propensity to learn better when there is a social element; they follow one of a limited number of narrative patterns, feeding the brain's relentless quest to find and remember predictable elements of its environment; and they tend to make sense, resulting in the release of memory-enhancing neurotransmitters when the brain makes sense of any part of the world.

<u>Emotion</u>

Stories evoke emotion. What distinguishes a story from a recitation of facts is the author's intent to stimulate one or more emotions in the reader. Some genres, such as comedies and tragedies, are distinguished entirely by the emotion they bring. Others are more complex: a romance can involve the whole gamut of emotions from elation to depression with humour, frustration, and envy often added to further engage the reader. A mystery story plays on our desire for completion but often uses other emotions along the way, too. A story that leaves the reader unmoved is rather a pointless story.

This is in marked contrast to the rather emotion-less schoolrooms in which we usually expect our students to learn their lessons. Once they get through with kindergarten, classroom décor is likely to become more and more neutral. As the seriousness of their studies increases, emotion is drained out of them. A teacher may add a little humour or even pathos to a lesson but this is decidedly extracurricular. Moments

of panic or stress may come during a lesson but rather than helping students to learn, these moments, and the shot of cortisol that accompanies them, are more likely to focus attention on whatever is causing the stress or panic than on the lesson itself (Kelly, 2021).

Yet, without emotion, there can be no learning (Immordino-Yang & Damasio, 2007). Emotional valence acts as a label attached to a particular experience or piece of information. The label tags the experience as "important" and it is important things that are stored in long-term memory. Without an emotional tag, the brain would not know that the experience was important and therefore worth remembering. This is why we remember things that surprise, excite, cheer, or depress us and not the thousands of other experiences that make up a day but do not evoke any particular emotion.

The emotions stimulated by stories, then, help us to remember not only the events of the stories but also the language in which they are told. It is precisely because they stir our emotions that stories help us to learn.

Sharing

Storytelling involves sharing on several different levels. Whether the story is heard or read, storyteller and audience share the narrative, they share the emotions evoked by the story, and they share meanings. At the same time, the community of hearers/readers share with each other the experience of the unwinding of the story, its twists and turn, and its eventual resolution.

When a teacher or author shares a story with students, the experience transcends the walls of the classroom. It brings in elements of experience that are not normally part of spoken or written classroom discourse. Instead of exercises and language samples designed to accustom learners to various elements of the language, a narrative can bring them a whole world of experienced packaged in the language they are studying.

The discourse itself, the narrative shape of the story, the way in which various elements are presented and the story progresses towards its conclusion, may be based on a shared understanding about how stories should develop. If it is familiar, that familiarity will guide them towards an understanding of the language used to tell the story, offering a well-trodden path to walk as they encounter new words and usages (for further discussion of the uses of familiarity, see the following section on Patterns). If the narrative form is an unfamiliar one, the story will serve to share with the learners experience of a genre that is used in the target language but which they have not yet encountered on their own.

The contents of the story, the people and things described, their encounters, attitudes, and reactions, combine to produce, for the people with whom it is shared, a holistic view of situations in which the target language is used. Instead of studying, memorising, and practicing fragments of the language, stories share a whole slice of life (however fantastic or true-to-life that slice might be) experienced entirely through the foreign language. In this sense, stories have much in common with other holistic approaches to language learning through use, such as Drama (Almond, 2005; Hillyard, 2015) and Task-Based Language Learning (Ellis, 2019; Willis & Willis, 2007).

At a deeper level, the act of telling and hearing/reading a story forms a shared emotional bond between teller and hearer/reader. As professional story-teller Deepa Kiran says: "When we listen to another's story, we are no longer strangers" (2016). As learners follow the vicissitudes of a plot, they cannot help but be emotionally engaged with the story and its teller . Indeed, there is evidence that patterns of brain activation, as measured by functional Magnetic Resonance Imaging, synchronise in the brains of teller and hearer during oral story telling (Stephens et al., 2010). The centrality of emotion to learning has already been highlighted in a previous section of this paper. Here it is the sharing of emotion that is significant.

Sharing stories has an even more profound effect than that as it engages the social element of learning which is often absent in classroom-based teaching. Lieberman (2013) reports the presence of a "social learning network" in the brain which is engaged when we learn from, with, or for other people and which operates independently from the "analytical learning network" which is engaged when we analyse and memorise by ourselves, as often happens in formal educational settings. He presents evidence that the social network is a more powerful tool for learning than the analytical network but is usually inactive when analytical learning is attempted. So, the sharing between storyteller and audience and between fellow audience members, because of its social nature, may in itself be a powerful stimulus to learning.

The sharing of meaning that occurs through stories is of particular relevance to language learners. One often hears of terms and expressions, such as *giri* (Japanese), *chutzpah* (Yiddish), or *Schadenfreude* (German) that are said to be untranslatable from their source language into another. The claim that they cannot be translated, however, does not mean that they cannot be expressed and communicated to people unfamiliar with the source language: very often their meaning is conveyed through illustrative stories or anecdotes. Even the apparently irreducible meaning of intensely personal experiences can be conveyed through the telling of stories, as famously exemplified by Proust (1913-1927) in his account of his personally significant ingesting of *madeleines* or by Bulgakov (1967) in his fictionalisation of the emotions evoked by the smell of his mother's *borscht*.

The importance of the ability of shared stories to lead to sharing of meaning is becoming clearer as neuroscience reveals that the meanings and associations of even mundane words (such as *dog*, *house*, or *friend*) are stored in the brain not in a single place for each word but broken down into different elements of the experience they evoke (the sound, shape, smell, fell, etc. of a dog) and that these elements, all activated by the single word *dog* are stored in different parts of the brain (Bundell, 2016). The significance of this becomes clear when we realise that it is our personal experience of dogs that wires these areas of our brain to react to the word *dog* in this way. Since each brain is wired differently (by the variability of human experience), shared meaning, even between users of the same language, is not easily achieved. Obviously, this is even more true of emergent users of a language, for whom the L1 associations of a word can be very

different from those of its so-called equivalent in the foreign language. The richness of opportunities that stories offer for contextualisation of meaning is a vital antidote to the shorthand classroom technique of having learners remember that *dog = chien = Hund = inu* and so on.

Patterns

Unlike our ongoing experience of the world around us, stories have a structure. On the most simplistic level this consists of them having a beginning, a middle, and an end. In slightly more detailed terms, all stories are considered to be analysable in the terms of Freytag's pyramid (Freytag, 1863), in that they have an Exposition, a period of Rising Action, a Climax, a period of Falling Action, and a Resolution. Within this overall framework, specific genres (romance, comedy, tragedy) have their own structures and conventions (Bawarshi & Reiff, 2010). Although these conventions are not always followed by authors and storytellers, the act of ignoring them and subverting a reader's expectations (as when, for example, a murder case is not resolved at the end of a detective story) is a confirmation that expectations about the structure of a genre exist.

Compared to the patterned structures of and within stories, the stream of information about the world around us reaching our senses, and through our senses, our brains, is anarchic and apparently formless. Zimmerman (1986) has estimated that the amount of information available to a person's senses at any given moment is equivalent to some 11 million bits. This information reaches us in a completely unstructured way, amounting to a constant buzz of data which, unlike the information in stories, has no clear shape or form. The difficulty of making sense of all this data is compounded by the fact that the bandwidth of our senses (to continue the computer analogy) is severely limited: Zimmerman's (1986) estimate is that human beings can deal with only 40 of those 11 million bits at any one time. Just knowing what to pay attention to is an enormous task (unlike in stories where the storyteller has any number of rhetorical devices to draw attention to significant information).

And yet, humans as a species have learnt to survive and thrive in an environment full of threats and dangers and with bodies which are dependent for their survival on taking in resources from their surroundings (air, water, food). We have learned to make enough sense of the unstructured information around us not only to get by but to exploit our environment in ways that have made us the dominant species on the planet.

In order to do this, our brains have learned to bring structure to our experience of the world, by finding patterns in the data we receive. In fact, the brain has been described as a pattern-detection machine (Kurzweil, 2012), with large parts of its processing devoted to this task. The widespread use of functional Magnetic Resonance Imaging machines over the last 20 years has revealed that, even when the brain is apparently at rest, it is searching through memories of sensory data looking for patterns (Lieberman, 2013). We are only momentarily conscious of this, when we wake from a dream and partly remember some impossible combination of events that was in our head before we woke: this is a residual trace of the brain's ongoing search for patterns.

What makes the detection of patterns so important is that finding patterns in past experience is the only guide we have to what will happen in the future. Patterns allow us to make predictions about the future and those predictions are essential to the survival of our bodies. Whether it is the angry bull charging toward us, the irresistible collection of candy around us, or the man with an out-stretched hand walking up to us, our bodies need to make predictions to produce the requisite bodily reactions to deal with what is likely to happen next: adrenaline for the approaching bull; insulin to deal with the sugar overload; and glucose to certain muscles to prepare them to contract or expand in order to shake the offered hand. Predictions, and the detection of patterns that makes them possible, are essential to both our physical and social survival.

The evolutionary origins of this pattern/prediction nexus are not hard to imagine: those who learnt to do this survived to pass on their genes to future generations and those who did not did not. Within the individual organism, this nexus is driven by the brain's reward system, principally the release of the neurotransmitter dopamine. Dopamine evokes feelings of pleasure in the body and is used by the brain as reward and encouragement for actions that are conducive to the survival of the body (Iversen et al., 2009), like exercise, meditation, or a good night's sleep. It is used to reward sense-making behaviour, like pattern detection and prediction, since this is also a survival mechanism. Finding a patterns in sensory data is rewarded by a release of dopamine, as is making a successful prediction about what will happen next (Schulz, 1998). Both searching for, but failing to find, a pattern and making a prediction that turns out to be erroneous are also rewarded by dopamine release (Schulz, 2016), presumably because making successful predictions requires a willingness to make unsuccessful ones.

Stories, then, because they are structured, play directly to the way in which the brain deals with sensory data. Our brain's search for pattern and structure will easily lead to the pleasure of a dopamine release when reading or listening to a story because, unlike the normal flow of sensory data, stories consist of rather obvious patterns, both in the arc of their plots and in the way individual details within the stories are structured. In the case of detective or mystery stories, the way in which the storyteller moves towards the revelation at the end of the story is pleasurable because it gives us a chance to predict the denouement; it then brings us further pleasure as our prediction of the end turns out either to be correct or, if it is incorrect, at least our expectation that there will be a denouement which takes account of the facts presented will be fulfilled. The same is true of anecdotes, fables, and many other genres.

In the language classroom, the pleasure of recognising narrative patterns and of predicting future events in a story can become associated with the words used to tell the story. This is because, as well as providing pleasure, dopamine has the function of fixing in memory the circumstances under which that pleasure was experienced (Iversen et al., 2009). So, hearing or reading stories in the target language brings both pleasure and learning, thanks to the pattern-recognition and prediction functions it enables.

It has been further suggested that stories can function as a training ground for the

brain's pattern-recognition skills (Kurzweil, 2012). Just as experts in Artificial Intelligence are training machines to detect patterns by presenting them with very simple patterns and gradually increasing the complexity, stories may help train our learners in the skills they will need to make sense of the world. It has also been suggested that readers seek solace in the structured world of stories from the confusing world of direct experience (see, for example, Sobhan, 2020).

How?

Language teachers already use stories as part of their teaching: the personal anecdote, the individual reading time, the extensive reading programme, the narrative essay. Given the power of stories to play to the brain's strengths and cement learning, through their evocation of emotion, opportunities for sharing, and reliance on patterns, it may be worth considering how stories can be integrated into every part of the language learning curriculum.

Reading

Learners read stories in the target language. Stories are not limited to fiction. Non-fiction accounts can also be cast in narrative style, as they usually are in biographies and many historical accounts. They can use stories for intensive language study, for the study of discourse and narrative structure, for literary appreciation, or for the sheer pleasure of reading.

Reading tends to be regarded as a rather solitary activity, but Lieberman's (2013) work on the Social Brain confirms not only that a story shared is a pleasure doubled but also that reading a story in order to share enhances the learning occasioned by the story. Opportunities should be made, then, for learners to share the stories they have read with others. They can do this through traditional book reports, through writing reviews for online booksellers, or by turning the classroom into a kind of book club where "sharing time" allows learners to tell each other about the books they have read, explain why they liked them, and make recommendations to each other.

Speaking and Listening

Daily life in a classroom offers a plethora of opportunities for sharing stories: the teacher shares a personal anecdote; a learner is asked to explain why they are late for class; learners can be encouraged to string newly-learned vocabulary into a story and share it (a powerful mnemonic in itself); they can re-tell or reconstruct a story from a textbook or from visual materials; the teacher can establish a regular story time where each learner is a storyteller, encouraged to reach new imaginative heights.

Special events can be arranged, including a visit by a noted story-teller or author, an exchange of video-taped stories with a class in another country, or a story-telling competition among learners.

Writing

"Let's write a story" may seem like an activity that is best suited to children's classes, but "narrative" is also one of the five main essay genres (along with: expository,

argumentative, persuasive, and descriptive) taught to university students in their native language (see, for example, Gill, 2014). Learners can write stories for their teachers to read, for their classmates, to be posted online, for entry into contests and competitions, for publication in the classroom, in the school or beyond.

Presentation and Discussion

Stories are often used to persuade, thanks to their emotional content. As such, they are well suited for use in a presentation or discussion class. They also tend to be remembered better and longer than a simple presentation of facts, because of both the emotions evoked and the dopamine released.

If students are taught that stories are the best way to persuade an audience of the validity of what is being presented to them or to alter the opinions of a discussion partner, they will readily take to storytelling as persuasion because of the familiarity they have with narrative forms. The author has had some success re-casting his Presentation course as a Storytelling course: the basic elements and products of the course are still the same but the task of making a presentation is re-cast as "Let's tell a story that will present this information." This takes the focus away from the mechanics of making slides and memorising scripts and re-formulates the task as one of engaging and swaying an audience both emotionally and logically and helping them to remember points that have been made.

This approach should also be kept in mind when it is the teacher who needs to make a presentation, maybe on some aspect of the history or ways of life of a country where the foreign language is spoken. Students who attend the presentation are more likely to be engaged by it and to remember what has been said if it is cast as a story than as a series of facts.

Integrating Approaches

Based on the recognition that language use is a holistic experience and not just the accumulation of a number of discrete skills (reading, writing, etc.), a number of integrating approaches to language learning have been developed that draw on the power of stories. These include the use of drama, simulations, and role-plays. Learners may be asked to draw on all their languages skills to create and perform an enactment of events based on reality or on their imagination.

Task-Based Language Teaching is another integrating approach which incorporates the power of stories to have learners use their language to carry out non-linguistic tasks, often based on stories of real or fictitious situation. A notable example is *The Snoop Detective School Conversation Book* (Kelly, 1995), in which learners are presented with a series of fictitious crime scenes and must use their language skills to solve the mystery and identify the criminal.

Concluding Words

The true power of stories is their ability to transcend our mundane existence. They take us out of our current situation and place us in the middle of event which, however

temporarily confusing they may seem, eventually make sense. They take us out of ourselves emotionally because we cannot help but react to the inhabitants of the story world, their trials and triumphs, their mysteries and resolutions. Above all, they connect us to other people, many of whom we will never meet: the storyteller, the characters in the story, other readers or hearers of the same story, and, ultimately, the friends and acquaintances we feel compelled to re-tell the story to. Stories transcend and stories connect.

As language teachers, we cannot afford to ignore the power of stories to enhance our students' learning.

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