

ABT: All you need to know to tell stories

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Science can be made a lot more engaging if we incorporate elements of storytelling. But, how do you actually get started with a story? The answer lies in using the universal narrative template of "and, but, therefore" or the ABT.

We all like stories AND for over four thousand years storytelling has been our most effective means of communication, BUT not everything is a story, THEREFORE to draw on the power of storytelling, we need to begin by actually knowing what is and is not a story.

A resume is not a story. A timeline is not a story. They are merely lists of facts. But, with a little bit of editing, they can be turned into a story — it just requires some work.

There are three main forces involved in creating a story — agreement, contradiction, consequence. These forces come together to form what is known as the **classical design** for stories. This is the shape we find in most myths, fables and allegories that have persisted over the ages. There are countless variations on this form, but it is the simplest, clearest, and thus most powerful.

Classical design begins with agreement. This is the part before the storytelling process begins — before anything 'happens'. In a murder mystery, this is the beginning, where we get to know the people of a town or business or a family. Nothing is 'happening' yet; everyone seems to be just fine. It is the country before the war, the married person before the betrayal, or the sports game before one team has a lead in the score.

The most common connector word used in this first part is **and**.

The story begins 'when something happens'. This is the second part, which is contradiction. The most common word for this is **but**. This means that we can go to a small town AND get to know a family AND everything seems fine, BUT then the father is found lying dead in the back yard. Now we have a story.

The third part, often referred to as 'advancing the narrative' is the force of consequence. We found the father dead, which means we immediately want to know what the consequence is going to be. For example, "... the father is found lying dead in the back yard; THEREFORE the police begin an investigation." For this third term, **therefore** is actually not the most common word of consequence. **So** is much more common, but in constructing a story 'therefore' is often a more powerful word, and so it is better for structural reasons.

Now we have our three functional words — and, but, therefore. Let's see how they work to create a story.

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Fig. 1. The ABT exercise: ABT gives a 'formula' to apply in any case. Fill in the blanks to create the ABT for this photo. "This boy was ____ AND ____ BUT ____ THEREFORE he is ____." For example, "This boy was tired AND sweaty, BUT he needed to get clean, THEREFORE he is washing in the river." Now do your own version!

Take Aesop's fable about the tortoise and the hare for example. This was the story of a race between the two; AND the hare being much faster, was way ahead of the lumbering tortoise. BUT she got so confident she took a nap as the tortoise plodded onward, passing the sleeping hare; THEREFORE the tortoise won the race.

That is the ABT. It captures the narrative core of the story. And because narrative principles are universal, it works just as well for non-fiction as for fiction. For a non-fiction narrative you can think of it as three things: set up, problem, solution. For example, you have the set up (we are fighting litter), problem (but there are no laws), solution (therefore we need laws).

What does that have to do with teaching science? Let's take a look at some examples of how this formula can be

applied to science classrooms. Here's an ABT for dietary choices: Palak-paneer (Spinach-cottage cheese) is a popular food choice AND palak (spinach) seems like a logical pairing for a meal, BUT palak contains oxalic acid that prevents absorption of calcium¹ from dairy items (paneer, in this case). THEREFORE these two should not be eaten together.

Let's look at another example. In the 1800's, people thought species never changed AND did not know about extinction, BUT fossils showed that species do change, THEREFORE Charles Darwin developed the theory of evolution by means of natural selection, which was eventually shown to be how species evolve over time.

The core challenge of creating a good ABT is to have it be both concise and compelling. To make it concise you want to cut it down to the bare minimum

number of words. But ... if you cut it too much, it is no longer compelling. For example, with our litter story, if we cut it all the way to, "We are doing things, but not all that is needed, therefore we're doing more," that may be an extremely concise statement of the narrative, but it's so short as to have no impact. We need to know the context (combating litter) and what is being done (passing a law) a little more precisely. This means that to make it compelling we need to add back a few pieces of information.

The ABT is a powerful tool for the development of narrative strength. It functions in two ways. It is a template for constructing concise and compelling statements, as well as structuring overarching narratives. But, the ABT is also

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the ideal workout device, in the longer term, for those who want to truly master the communication power of narrative.

It is the central tool for training that will eventually lead to the ultimate goal of narrative intuition, which is the ability

to not just see narrative structure but to feel it as well.



Note:

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Further readings

1. Weaver CM, Martin BR, Ebner JS, Krueger CA. Oxalic acid decreases calcium absorption in rats. The Journal of Nutrition vol 117, 1903-1906, 1987. URL: <http://jn.nutrition.org/content/117/11/1903.extract>



Randy Olson earned his PhD in biology at Harvard University AND achieved tenure as a professor of marine biology at the University of New Hampshire, BUT then he developed an interest in the mass communication of science, THEREFORE he resigned his professorship, moved to Hollywood and became a filmmaker. He is the writer-director of many award-winning films and has written three books, including 'Houston, We Have A Narrative: Why Science Needs Story' (University of Chicago Press, 2015). To know more about him, check out his web page: http://www.randyolsonproductions.com/randy_olson/randy_olson_index.html