On Research...
Blogging about research issues at Ohio State University

Of ghoulies and ghosties and long-leggedy beasties . . .

Posted on January 31st, 2012 by earleholland

Is it ever acceptable to deceive children as a strategy for teaching them?

For most folks, the quick answer is a resounding philosophical "no!" Regardless of the fact that sometimes deception can teach a powerful lesson, the idea of deluding impressionable children with falsehoods is usually considered out-of-bounds. We simply don't like "lying" to our kids.

But what about Santa Claus, the Easter Bunny, the Tooth Fairy . . . ?

In those cases, we rationalize the fib, justifying it by explanations that it teaches children the joy of giving, of love for another, and other value-laden premises. But does that really make it alright, the end justifying the means?

The question arose over the last week as discussion grew on a listserv for science writers. It began with a writer looking for insight on writing about science for middle-school children, as well as useful websites that seemed to be successful with kids that age.

One respondent pointed to websites linked to cryptozoology, the supposed study of animals not proven to exist, creatures such as the Loch Ness monster, Sasquatch or the Chupacabra of legend. The idea was that kids' fascination with such mythical beasts would fuel their curiosity and drive them to learn.

Others disagreed, sometimes vehemently. Their argument: Don't use "pseudoscience" to teach science!

At issue was the sorry state of science education and how it might be improved. At the heart of the dialogue was the general agreement that understanding science required the ability to gauge the validity of information and extrapolate meaning.

Those in the camp defending the value of "studying" cryptids pointed to a well-known internet website touting the existence of the Pacific Northwest Tree Octopus, and cited how it had been used in classrooms as a lesson for students in evaluating data, since the kids were

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enthralled by the idea of such a strange animal.

Over several days, the role that critical thinking played in understanding science emerged. When, many asked, should critical thinking be taught in school? Some argued that its place was in high school, that such evaluative skills were beyond the capability of the very young. Others countered that it is imperative to include it at the earliest ages so it becomes integral to the thinking process.

Those of us baby-boomers learned science the hard way, through rote memorization and lessons pontifically delivered from teachers and profs. In essence, that approach basically weeded out those whose personal interest in science couldn't outweigh the tedium and boredom of lists.

Today's kids have it so much better. Their teachers know, thanks to years of actual research, that kids learn best through inquiry, their own investigations. While their parents' teachers took on the role (often inaccurately) as experts, today's teachers function more as guides than authorities. And science classes are so much the better for it, as are the children who learn there.

So if inquiry is the key to success, then what's wrong with using a premise that is false as a demonstration project to hone critical thinking skills? Many of the writers on the list saw no problem.

What's wrong with using the Tree Octopus site, or any other pseudoscience approach — UFOs, intelligent design, ghosts, etc. – is that their existence is untestable. There is no way to experimentally determine whether they are true or false. We require such tests to label something as science.

Granted, deception is used by researchers all the time. Much psychological research could not be done without some use of deception to insure accurate responses. And there are federal guidelines laying out specifically what can and cannot be done in research using humans that involves deception. There are also additional restrictions on using children in such research.

So one could argue that kids are protected from harm in such cases.

But what's missed in that argument is the impact made on children when they discover they've been misled. The faith and confidence they had in their teachers can be strained and a little bit of their trust is lost in the process.

Yes, critical thinking is essential in improving students' – and the public's – understanding of science. But how they attain that skill is equally important.__*Earle Holland*

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