Beliefs and attitudes can influence reasoning

January 23 2014

In multiple studies investigating how people learn, Dr Matt McCrudden, an Associate Professor in Victoria's Faculty of Education, found that high school and tertiary students of similar age and reading ability were interpreting text they had read in very different ways.

Subsequently Dr McCrudden focused his research on text about controversial topics, such as same sex marriage and climate change, and found that differences in interpretation could largely be attributed to the reader's preconceived beliefs.

"People's biases often came into play when they were evaluating information that they already had an opinion on," says Dr McCrudden.

"They were inclined to focus on information that supported their point of view, rather than objectively weighing up the facts."

This finding has been reinforced by a recent study Dr McCrudden carried out, which examined how people evaluate information about climate change.

"For instance, people with opposing views on whether or not climate change is happening used the same piece of information—that 'in Sydney Australia in 2013 the average temperature in October was 22 degrees, whereas in 2012 it was 21 degrees'—to support their point of view.

"It appears that many people were prepared to draw strong conclusions

based on weak evidence such as temperatures over a couple of years rather than looking at climate patterns over three decades or more which is an essential aspect of the climate change debate," says Dr McCrudden.

"A key feature of effective critical thinking is the ability to evaluate information independently from one's beliefs. However, effective critical thinking can be a challenge if people discount or dismiss information consistent or inconsistent with their beliefs."

Dr McCrudden says one possible way to minimise belief-motivated reasoning in an educational setting would be to give students pre-reading task instructions that encourage them to consider the merit of both sides of an issue.

"This may prompt students to actively question their beliefs, seriously consider alternative views, or update their topic knowledge. However, more research is needed to understand the conditions under which task instructions affect topic beliefs."

Provided by Victoria University