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## Utilizing Reflective Writing in Introductory Physics Laboratories: Students Perspectives of Reflective Writing to Explore Science Textbooks

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The language of science is a language that scientists use to talk about nature. Students are not familiar with this language and as a result they have great difficulty understanding scientific texts. Students tend to memorize the materials that they see in the textbook without thinking about their meaning, because they believe that language and words hold the knowledge and they need to use the same words and terms in order to show their understanding.

Such students who think that knowledge in science is a body of settled facts that comes from authority take a passive role in learning and become a receiver of knowledge, while those who try to make sense of the science language and construct their own understanding by questioning the knowledge presented to them are more likely to develop reasoning and critical thinking skills. It is up to us as teachers to motivate students to think about the meaning of concepts rather than memorizing the terms and definitions. Having a hermeneutical approach to science helps students gain a deeper understanding of the meaning. To help students approach the science textbooks in the manner of hermeneutics, we use a writing activity called "reflective writing" in a new style of introductory physics labs called "laboratories" at Mount Royal University. This paper provides an introduction to utilizing the "reflective writing" activity in "laboratories" and I will discuss students' perspectives on these activities. Interviews with students who completed the reflective writing assignments in the introductory physics laboratories as well as an analysis of students' reflective writing assignments helped us find key aspects that make the reflective writing activity useful to the students.

Keyword: Science. Interpretation. Hermeneutics. Reflective writing, Laboratories.

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