

Problems with high school education caused by the description within textbooks of "Geography" and "Earth Science"

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Yamamoto and Ogata have shown that terminological problems exist in high school textbooks of geography and earth science, focused on geomorphological and climatological words. In this study, I show some cases about the influence of authorized textbooks on the teaching process, relating to this terminological problem.

Education processes in high school tend to use textbooks as doctrine. In other words, the “proper answer” tends to only be limited to the content of the textbooks. For example, when a figure, a term, a definition of the term, and a context are written in a textbook, other figures, terms, definitions and contexts are regarded as “wrong answers”, even if they are adequate. As for terminological problems, the “right answer” in a subject such as geography becomes the “wrong answer” in another subject such as earth science.

Even the task of writing short sentence answers, a common feature of exams, often does not test one's intellect but rather functions as only a fill-in-the-blank activity to test a student's verbal memory. To make matters worse, there are some inadequate descriptions in textbooks.

Under such circumstances, students cannot be evaluated properly, and professors making entrance exams and the students taking them may be embarrassed. Furthermore, such dogmatism may lead students to only memorize the descriptions, instead of thinking about the matters deeply.

To solve these problems, teachers should have proper knowledge and logic, and should know of a diverse selection of description. However, learning variable information in regards to trans-subject matters, thus investing in several textbooks and other source of information, are much too costly for an educator.

Hence, for the solution, if terms and definitions are variable, we should indicate and list these words for educators and the education industry. Furthermore, we should develop a guideline of words and definitions so that we can rid the education process of such inconsistencies, thus making the geoscience study process more efficient.

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