DIFFERENTIATING OBSERVATION FROM INTERPRETATION

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Be informed requires much more than access to information. It is necessary to know how to select informations and how to articulate them in the resolution of a problem. Scientific communication consists in the presentation of observations and their interpretation. Critical reading of papers verifies the exactness of observations but allows alternative interpretations. Scientific education demands therefore the ability of differentiating observation from interpretation to distinguish correlation from causal relationships. Observation is the gathering of information through the senses or intermediated by instruments. As a part of the course *Introduction to Science, QBQ2006*, at the Biochemistry Department of the IQ-USP, an activity was developed and implemented aiming to describe the different ways of obtaining information and to develop the ability of differentiating observation from interpretation, which is by no means trivial. In this activity five boxes containing various objects were presented to students and they were asked to describe the contents of each box. The boxes were built in such a way to allow only the use of vision (Box 1), tact (Box 2), audition (Box 3), or an instrument (Box 4). All forms of observation could be used on Box 5, containing gypsum and water in a recipient. The answers given by students indicate a strong tendency to interpret in stead of observing, particularly on Box 1. In subsequent discussion, the students were asked to distinguish in their own answers the observations from interpretations. Evaluation of the activity showed that 91% of the students agreed that it was successful in clarifying the difference between observation and interpretation.

Keywords: scientific methodology, Science, observation and interpretation.