

The Jelly Jar

Approximately five-seven weeks into our course, I bring to class an 8 oz. jelly jar full of various kinds of nuts, bolts, nails, and screws, along with one or two items that appear to defy classification. I place my teaching table in the middle of the room, and the students arrange their desks in a circle around it. I pour out the pile of hardware on the table and ask for a volunteer to sort out the items into categories.

There are a few rules: 1) Each item must be accounted for, 2) A miscellaneous pile is not allowed, and 3) The other students must observe closely, but they are not allowed to assist the volunteer in any way. My students usually do not hesitate to volunteer. In fact, they often say, “How hard can this be?”

Immediately, the volunteer moves the hardware around into small piles. However, the volunteering student often becomes confounded by the one or two items which do not appear readily to fit into any of her/his constructed piles. For example, among the screws is one without a head; in addition, there is a small white-coated hook with a threaded end that doesn't seem to fit with the other items. Initially, the student makes a miscellaneous pile and must be reminded that a miscellaneous pile is not allowed and that the item(s) must be accounted for. Then the student is stumped and pauses to think, sometimes re-arranging the piles of hardware to accommodate a particular item. Eventually, however, the student makes the final decision necessary to complete the turn.

Then it is the volunteer's turn to remain quiet while the rest of us attempt to figure out which classification scheme the student used to organize the categories. We examine each pile and come to a consensus upon the student's rationale as to how each item was identified and categorized. We decide how to label each pile, and we write these labels on the board. The last decision we make has to do with coming up with an over-arching organizational scheme that takes these labels into account. Usually the observing students choose such categories as *function*, *shape*, *size*, and *proper name*.

I scatter the piles and ask another volunteer to go through the same process, observing the same rules. We play the game several times this way (not yet revealing volunteers' ways of organizing) until the board is filled with different organizational schemes for these hardware items. At this time, we ask the volunteers to tell us how they organized the items. Sometimes we have chosen the correct pattern, but often, the volunteering students had an altogether different organizational scheme in mind than we had chosen.

The students are able to, usually quite easily, see which schemes do not work; namely, the ones which have categories that do not fit well into their larger organizational scheme. The students who volunteered look at the board and realize, often, that their categories were made with a variety of organizational plans in mind.

We discuss this in terms of their student essays: An essay does not have room for more than one thesis, and, further, it does not have room for ideas in paragraphs that do not further discuss this thesis that must truly control the essay. Students must construct a thesis that covers all of their subordinate ideas in a unified fashion. Two plans are one plan too many.

This game is also a tool to teach students that knowledge is subjective and constructed. Knowledge is not out there absolute, waiting to be discovered. By looking at the board, they can readily see all the concretely, different ways that knowledge can be built out of the hardware in this jelly jar. One volunteer may construct knowledge in one way, and another volunteer in another way—all using the same items (information). Thus, bodies of knowledge change and evolve over time.