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## Opening the Way for Questions: Techniques for Encouraging the Expression of Curiosity

Have you ever wondered, at the close of a training session, why no one asked any questions? Did you hope the absence of questions meant that your trainees understood everything you had told them? Or did you suspect that some of them had failed to grasp even your basic message? Many teachers have this worry from time to time.

Volunteer tour guides, called docents, in a major art museum worked with me recently on an experiment which has important applications to question-asking in industrial and business training, particularly training aimed at changing attitudes. The experiment tested two procedures. When docents used these two procedures on their tours, visitors asked seven times more interpretive questions than they had on tours by the same docents prior to the experiment.

The idea for using the two procedures grew out of in-depth studies of curiosity and why we sometimes stifle it. Ask yourself why, in your role as trainer, you sometimes refrain from asking questions. Are you afraid you may embarrass a student who doesn't know the answer? Do you identify with the students and recall painful experiences when you, as a student, were asked questions and then slapped down for giving the wrong answer? Many people have such memories.

In fact, when adults interviewed in the curiosity study were asked, "what do you think encourages people to ask questions?" they replied, "I don't know" or "I'm not sure." They then said, "But I can certainly tell you how curiosity is discouraged." They said, for example, "The home I grew up in considered that, mostly, asking questions of people was rude. It was something that was not done." Or "In the school that I attended, we were always told that 'empty barrels make the most noise.' We understood this to mean that only the dummies asked questions." Others recalled they'd been warned by their parents not to ask questions in school lest the teacher punish them for challenging her authority.

### Why Not?

The results of the curiosity study supported by other evidence in the literature, strongly suggest that adults as well as children, often act as if they were following a number of rules that inhibit asking questions. These rules seem to be:

1. Don't ask questions, particularly of strangers. It's not polite, and may be dangerous.
2. Don't ask questions that may embarrass or expose the ignorance of the person.
3. Don't ask questions that seem to challenge the other's authority, or that may sound hostile or belligerent.
4. Don't expose you own ignorance with a stupid question. You are likely to be ridiculed.
5. If others seem rushed, or very busy, don't take up their time with questions.

Are you, in your role as trainer ever aware of a set of inner restraints that may inhibit your students from asking questions? Have you ever felt:

1. A dislike of being asked any questions?
2. A fear of exposing your ignorance or a special fear of being "shown up" by a student?
3. Fear of exposing something on which you are ashamed?
4. Fear of discussing painful subject matter?

5. Reluctance to share knowledge that represents personal or group power, or fear of inadvertently revealing something told to you in confidence?
6. Sheer weariness, actual lack of time, and the feeling that the asker of questions is wasting your time and the time of the other in the group?

All of these fears were expressed by one or another of the docents who engaged in the experiment.

But from the curiosity interview also came clues to circumstances that encouraged people to ask questions. It seemed the most important encouragement came from the model set by an authority figure. "My curiosity and asking questions in ascribable to my father, who was himself a person moved by curiosity." Others mentioned a beloved aunt, mother, grandmother, or a teacher. Some said "People reinforce each others' curiosity. You need approval from parents, friends, peers."

**How Much Time?**

Another condition stressed in the interviews was time, time to wonder and think, "You need time, time and a safe environment in which to ask questions."

We know from our own experiences as well as from research in social psychology that we often acquire new patterns of behavior from observing the behavior of others. This is particularly true when the behavior of others gains social approval or other rewards. A trainer or leader can encourage questions by posing the very questions he or she wants the students to ask. By doing this, a trainer is saying, in effect, "it's okay for you to ask these questions, they won't embarrass me."

The role of time in encouraging people to ask questions has been less obvious. Mary Budd Rowe, a science teacher who studied inquiry behavior by children in elementary school classrooms discovered a phenomena she called "wait-time". She defined wait-time as the amount of time allowed a student to begin a reply to a question asked by the teacher. Rowe found from analysis of 300 tape recordings that the average teacher wait-time was one second. This meant that after a teacher asked a question, students had to begin a response within about one second. If they did not, the teacher repeated, rephrased, asked a different question, or called on another student.

There was a second potential wait-time following the student's response. When a student made a response, Rowe found the teacher usually reacted or asked another question within an average time of less than one second. Rowe diagrammed the two potential wait-times as follows:

| Question by teacher | First wait time | Student's response | Second wait time | Teacher's reaction |
|---|---|---|---|---|

In classrooms where wait-time was one second, inquiry by students was limited. In classrooms where the teacher waited as long as three seconds for the first student reply to a question, the quality of student inquiry behavior changed. And if the teacher waiting during the second wait-time, the quality of students' responses changed dramatically. There was speculation, sustained conversational sequences, alternative explanations, arguments over the interpretations of data, and the frequency of students' questions increased.

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**Do Questions Breed Questions?**

In our museum experiment, docents combined modelling, i.e., asking questions we knew visitors wanted to ask but usually inhibited, and a six second wait-time. On tours prior to the experiment, visitors as a group asked about seven questions per tour. Most of these were safe questions like "When was the artist born?" or "Is the artist still alive?" Only one or two questions were asked about meanings and values. On the experimental tours, when docents themselves asked questions like "Is this art?" or "Why is this art?" and allowed wait-time, visitors asked seven times more interpretive questions per tour. Table I is a statistical summary of the experiment.

**Table I: Effect of Experimental Treatments on Mean Number of Interpretive Questions Asked by Visitors per Tour**

| Pre-experimental | Mean Number of Interpretive Questions Asked by Visitors Per Tour | Standard Deviation |
|---|---|---|
| N = 20 tours<br>20 different docents including A, B, C, D, E, F | 1.5 | 1.5 |
| N = 6 tours<br>6 participating docents A, B, C, D, E, F | 2.2 | 2.13 |
| N = 3 tours<br>participating docents A, B, C | 2.7 | 2.52 |
| N = 3 tours<br>participating docents D, E, F | 1.7 | 2.08 |

| Experimental | Mean Number of Interpretive Questions Asked by Visitors Per Tour | Standard Deviation |
|---|---|---|
| Docents using only more Type II questions (A,B, C)<br>N = 12 tours | 11.8 | 6.48 |
| Docents using only wait-time (D, E, F) | 9.7 | 4.68 |
| Docents using both Type II questions and wait-time<br>N = 12 tours (A, B, C)<br>N = 12 tours (D, E, F)<br>N = 24 tours (A, B, C, D, E, F) | <br>19.6<br>14.7<br>17.1 | <br>5.74<br>5.59<br>6.22 |

To docents, a rewarding aspect of the experiment was the group discussions generated by the new procedures. Instead of losing participants as they went along (a familiar occurrence on guided tours) the lively groups often attracted new people en route.

**How Can I?**

Are modeling and wait-time difficult skills to teach? The six docents who volunteered for the experiment were already highly trained and eager to learn skills which would encourage visitors to ask more meaningful questions. These docents said their own goals for their tours were:

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- "to open people's eye to all the sensations around"
- "to get visitors to let their minds soar"
- "to learn new ways to look at art, and then, to use these new ways to take a fresh look at all the world around them."

The docents viewed their tours as events over which they had control and they expressed a curiosity experiment with them. Each docent spent at least eight hours in individual training sessions with me to practice the modeling and wait-time procedures. All six became highly skilled at framing interpretive, open ended questions.

For two of the docents, it was difficult to wait six seconds after asking a question. One of these docents initially interpreted wait-time as a potential threat to the visitor rather than seeing it as a respectful pause. Once she got over her reluctance to pause, and found that visitors responded with what she considered more interesting replies and with their own questions, she used wait-time easily. She said learning wait-time was like changing her golf swing, difficult but rewarding. The second docent was perfectly able to pause, and did so for the experiment. She believed, however, that her fully uninterrupted lecture to visitors would benefit them more than their own questions. This is a widely held point of view among teachers.

Rowe and her associates have reported considerable difficulty in teaching wait-time. In my opinion, wait-time is not to be taught or used as a mechanical device. It should be regarded as a courteous pause during which students have time to digest and ponder what they have been told to reply to the teacher's questions and to frame their own if they have them. The docents valued the wait-time as an opportunity to listen carefully to visitors' comments and questions. One docent noted: "I'm convinced now that visitors are here on a less superficial basis than might have thought before… There is an underlying element of 'What's this all about? Why is this important? How can it enrich my life?'"

In industrial training, questioning of meanings and values may not always be welcome at first. However Kurt Lawin's work with industrial groups during World War II suggests that full discussion of all sides of a question often results in new constructive attitudes and effective solutions to problems.