

ONE MINUTE TIMINGS: A STRATEGY FOR GENERATING HIGH-FREQUENCY RESPONDING

An extremely useful way of occasioning relatively high-frequency responding from clients, students, colleagues and others is to arrange a brief period (usually a minute) of explicitly timed responding. Preface the timing with a clear explanation of the procedure and content (see below) and, after answering any questions, start the timing by saying "Please begin." End with "Please stop."

Among the best ways of using such timings is to specify a "Think/Write" topic such as:

- facts about _____ that you recall.
- main ideas from _____.
- all foods and calorie values you can think of.
- topics for discussion
- things learned in a previous didactic session
- low-fat snack foods
- topics in need of further explanation/information
- reasons for _____ (e.g., keeping food records, stopping smoking, losing weight, increasing exercise, learning math, etc.)
- suggestions for improvement
- topics for Think/Write timings
- favorite foods or activities

Be sure to recommend short-hand and abbreviation so that writing speed does not slow down the flow of ideas. Also, if the topic area is either too narrow or too broad for a one-minute timing, you may want to use 30 seconds or 2 minutes. But it is important to keep the duration short enough so that responses are still being made at the end of the timing. Don't worry about the lists' being exhaustive.

In even a small group there's likely to be a fairly thorough coverage of ideas. Repeated timings can be used to exhaust all responding if you feel this is necessary. The main point is to produce a peak rate of responding, not a complete set of all possible responses. The pace at which people can produce such material is a very sensitive measure of the degree to which they know, recall, or are "committed" to information, ideas, reasons, etc. In more technical terms, rate of response is the most direct quantitative measure of the probability of behavior (Skinner, 1938).

Immediately after the timing thank all participants and ask them to count their responses and compute their counts per minute-- of correct and incorrect responses, when appropriate. (Obviously, if the timing was 30 seconds or 2 minutes they will have to multiply their counts by 2 or divide by 2, respectively.) Ask them to read their frequencies in turn as you record the numbers, ideally as dots on a chart transparency on an overhead projector, or on a blackboard or piece of paper. The range of frequencies and middle frequency are good summary descriptors of the group's performance and can serve as useful feedback for you and them.

After collecting the data ask participants to share content. As they say items write them on the overhead transparency, chart pack, or blackboard. The result will be a list that, if not exhaustive, at least represents a relatively large set of ideas or responses to the topic at hand.

Use of these timings can focus on content, or quantity, or both, depending on your purpose. In brainstorming or group process applications repeated timings can be used to alternately expand and focus on topics, sub-topics and related issues. By alternating timings with sharing, organizing lists, prioritizing selection, editing and other forms of processing, they can help to produce and organize a remarkable amount of material in a relatively short period of time. As a way of

accelerating individual creativity, they can help one to generate lists of ideas, descriptors, topics, etc. for outlines, prose, poetry, business plans, speeches, artistic projects and so forth.

As a quantitative tool, brief timings provide a basis for ongoing and/or before-after evaluations. For instance, weekly timings of any known foods and calorie values, when charted (either as ranges for groups or on individual charts) provide a simple ongoing indication of changes in usable calorie knowledge. Conducting a timing before and after a didactic measures short-term retention of new ideas or information. (In general we see a doubling in frequencies from before to after, on the average, as an effect of most kinds of lectures or presentations. Doing better than $\times 2.0$ is a good indication). By means of timings we can easily compare the effects of different session formats or strategies (by comparing their frequency multipliers from before/after measures.) And finally, frequencies of "Think/Write" performance are good measures of "creativity" or other "thinking" skills on which repeated practice can have marked effects. (Frequencies of Think/Write details are good measures of reading or listening comprehension, too).

Addendum on Brief Timings

At the technical training meeting in New York City on 82-09-22, we did a one minute timing with 14 behaviorists in which they were asked to Think/Write ideas from a previous two-hour discussion of "expansion, summary and review." This was the first such timing for most of the participants so they may not have performed as well as those more experienced with brief timings (e.g., they didn't abbreviate words and phrases to maximize ideas/minute). The range of performance was 5 to 12 ideas per minute with a median of 9.

We then shared the ideas by writing them on a blackboard. Here is the list:

EC (environmental control)
FR (food records)
PFS (program for success)
PFF (program for failure)
I Dif. (individual differences)
Pt. Ex's (patient examples)
fundamentals
summarize
don't nec. stick to outline
flexibility
long term
shaping
expand vs. labeling
weave fundamentals
positive
frequent summary
pt.'s history
relevance to whole group
clarity
individual focus
learning
organizing
review
why
how
what I'm saying
expand
what's the point?
plan
calories
stories

use own words
examples
before/after
fixed and changing strategies
exercise
outline
keywords
ask questions
repetition
probes
explain
principles
calorie balancing
total picture
no one-line answers
elaborate
beginning
middle
end

It was clear from this example that 1 minute timings can themselves be useful strategies for review and summary -- 50 ideas from one minute of group thinking. Even though some of the ideas were redundant, it's always helpful to express the same things in several different ways.

Immediately after sharing the list we conducted another timing on the same topic. This time the range was 9 to 10 ideas per minute with a median of 14. This represents a short-term performance multiplier (i.e., learning effect) of X 1.75.