Rate of Response: A Legacy for Teachers and Students from Skinner Through Lindsley

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Most Important Advances in the history of Science Have Come from Improvements in Measurement.

“My most important contributions were rate of response and the cumulative response recorder.”

- B.F. Skinner


Lindsley later preferred to call it “frequency.”

Skinner’s Standard Frequency Chart

Cumulative Records
Basic Schedules of Reinforcement

Before Samson Rat, Lindsley had planned to be a physiological psychologist....
But with the Behavior Research Lab he committed himself to human behavior frequencies.

- Psychotic behavior
- Behavior pharmacology
- Effects of advertising
- Conjugate reinforcement
- Social behavior and communication
- Competition and Cooperation
- Geriatric Behavior Prosthesis
- Depth of sleep
- Clinical assessment
- Television / media preference
- Effects of psychotherapy
- Supervision and clinical training
- Parent training in behavior management
- “Retarded” behavior (with Barrett)

He took that commitment into Education (With original “silent” co-author Bea Barrett)

Eric Haughton: Co-founder of Precision Teaching

“You can take behavior out of time…. but ….you can’t take the time out of behavior.”
- Dr. Eric Haughton

Frequency Measures for Skills & Knowledge

“Teaching is not only producing new behavior, it is also changing the likelihood that a student will respond in a certain way. Since we cannot see a likelihood, we look instead at how frequently a student does something. We see how fast he can add. The student who does problems correctly at a higher rate is said to know addition facts better than one who does them at a lower rate.”

- Dr. Julie Skinner Vargas, 1977, p. 62
We can SEE the difference between beginners and competent performers.

But we CAN’T SEE the difference with percent correct!

Frequency Measures Enable us to Define Competent Ranges of Behavior

- Tapping a surface: 250-350 per minute
- Writing Digits: 140 to 160 characters per minute
- Arithmetic: 70 to 110 computations per minute
- Keyboarding: 60 to 90 words per minute
- Brainstorming: 20 to 30+ ideas per minute
- 3-point basketball shots: 15-25 hits per minute

We can SEE the effects of practice.

The same accuracy can occur with different performance patterns and levels.
We can SEE when we’re asking students to work for too long at a time.

We’d never be able to SEE endurance precisely without frequency measures.

We couldn’t SEE component-composite relations without frequency measures

“The child knows best.”
“Care enough to chart.”