

# ABA 96 Workshop #12 - Conducting Fluency Research: ChartStat™ Tools - from Ogden Lindsley

**“Tools not rules  
you fools!”  
David Ogilvy**

We have made Skinner a genius by ignoring his powerful methods of free operant conditioning and standard graphical analysis, and ourselves dullards by using controlled operants, small groups, and statistical analysis by formula.

**How to get  
observed and  
expected**

Chart tests used to get observed and expected in Precision Teaching follow:

Test Name -Years		Process	Problem
Median	65-66	Count dots above & below overall median	As increase length of during phase P-value drops!
Mid-median	67-68	above & below line 1/2 way between phase medians on chart	Falsely low P's to no frequency jump with large celeration turn
Celeratn. proj	69-81	Count dots above and below celeration proj.	Does not give separate P's for jumps and turns
Course proj.	69-81	Count dots in and out of projected course	Gives 10x lower P value than celeration proj.
Jump	81-on	Take out turn by proj. new celeration at old frequency with .	None
Turn test	81-on	Take out jump by projecting old celeration at new frequency	None
Bounce widen	81-on	Take out cel and freq by projecting old bounce at new freq and celeration	None
Outlier rem.	91-on	Take significant outliers from old course	Handles outliers which give falsely low P's

**How to  
calculate P  
from observed  
and expecteds**

Fisher's Exact make 2x2 table, add both ways, foot on bottom, factorials, solve.

Exp	Obs	Total		
10	19	29	P=	21! 22! 29! 14!
11	3	14		10! 19! 11! 3! 43!
21	22	43		P= 7 in 1000

**Other quick  
tests for  
distributions**

Quenouille overhang test                      P      Q      T  
 Quenouille overhang test.                      <.05   9      11  
     But hard to remember cut off numbers.      <.01   12      15  
 I find it easier to do ChartStat™ put “foot on bottom,” factorialize.  
 Fishers exact is where it all came from in the first place.

**Only glimpse**

ChartStat™ coverage takes a full day with participants already SCC familiar.