

**Where we start**

First we will find out what we know before we start. We will tell a neighbor what we know about precision teaching free operants. Our listening neighbor will count out loud for each fact heard. I will start us and stop us after one minute.

Then I call for the numbers counted and share them at the overhead projector. Our group chart will give a rough idea of what we knew coming in.

**Precision Teaching**

Applying Skinner's laboratory developed self charting of performance frequency to classroom teaching we find four parts.

**Heart** of Precision Learning is self recording on our standard chart.  
Slogan: "Care enough to chart."

**Head** of Precision Learning is our learner. Ideally, each learner does all teaching acts and decisions - a goal constantly strived for.  
Slogan: "Child knows best."

**Hands** of Precision Learning are daily, timed, charted, fast, aimed practice sessions. Ten second within day timings build skills. One minute daily timings build fluency.  
Slogan: "Daily practice builds fluency."

**Health** of Precision Learning is weekly standard chart sharing with other learners.  
Slogan: "Share a brag and help each week."

**PT's Chart Heart is Multiply**

The important thing about our Standard Celeration Chart is that it has a standard multiply scale up the left for performance. This permits learners to project their own learning with straight lines and tell on what day they will reach their aim.

**Learn Chart Performance Lines in See+Hear/Say+Do Channel**

Stand, Follow leader and point and say to frequency lines on walls of standard chart room. Leader corrects point positions.

**1000 per minute**

**100 per minute**

**10 per minute**

**1 per minute 1000 per day**

**100 per day**

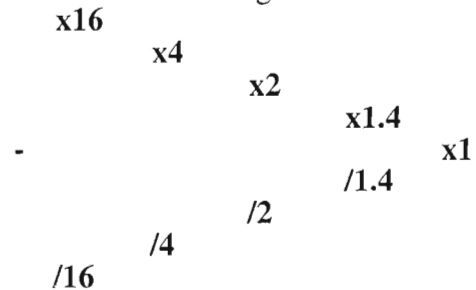
**10 per day**

**1 per day**

(When we have more time we have learners draw their own standard chart on a blank white sheet of paper.)

**Learn Chart Learning Lines in See+Hear/Say+Do Channel**

Stand: Follow leader and rotate left arm at correct angle (slopes) of learning lines. Leader corrects arm angles.



Learners describe their learning with these values. Most aim at x2 per day in their acquisition sprints and at x2 per week in their daily practice to fluency.

**Seven Free Operant Freedoms**

Four years ago I listed four free operant freedoms (Lindsley, 1996). I overlooked the learner's freedom to choose their task, to select their reward, and to invent and try new task improvement changes. This brings our operant freedoms to seven:

**Choose their task**

**Present all cues**

**Form their responses**

**Repeat and self correct responses**

**Speed without limit**

**Select their reward**

**Invent and try new changes**

We strive for these seven freedoms to put our learners in charge of their own learning. Sharing the teaching acts and decisions often overcomes resistance from willful, head strong learners. Most toddlers, and older handicapped learners do not invent and try new improvement changes, but we usually can give them all of the other six freedoms.

These seven freedoms also permit each learner to work at their own fastest maximum speed. The freedoms remove what Carl Binder calls fluency blockers put in by discrete trials.

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### How Does Performance Grow

Each verse of the lyrics to the tune of Jingle Bells describes a different thing we learned about performance from our learner's charts.

- 1 - Performance multiples.
- 2 - You start with at least one to learn.
- 3 - Learning corrects is independent from learning not to make errors.
- 4 - Performance of different students spreads equally on a multiply scale.

### Jingle Bells

1 Dashing through the snow,  
In a one horse open sleigh.  
O'er the fields we go,  
Laughing all the way.

**Chorus** Jingle bells, Jingle bells,  
Jingle all the way.  
Oh what fun it is to ride  
In a one horse open sleigh.

### How Does Performance Grow

1 How does performance grow?  
As we chart it day by day.  
To change it we must know.  
To forecast we must say:

**Chorus:** Multiply, multiply,  
multiply each week.  
That's how our performance grows  
to the fluency we seek.

2 Start with zero? No!  
To that there's no debate.  
We need 1 to grow,  
to 2, then 4, then 8!

3 Do errors go away,  
when corrects go up each day?  
It's not as you think.  
They go their own way!

4 Middle guy does 10.  
and our bottom guy does 2.  
Will top guy do 18?  
No! Top guy does 50!

### Big 6 plus 6 elements isolated

Eric Haughton and Ann Desjardins in 1980 developed six pinpoints for extremely fast practice of fine motor skills.

Their big 6:

**Reach**  
**Point**  
**Touch**  
**Grasp & Release**  
**Place**  
Their Plus 6:  
**Pull-Push**  
**Shake**  
**Squeeze**  
**Tap**  
**Twist**

These component skills should be at 200-300 per minute. They worked with both hands and charted each hand separately.

### Big 6 Compound

Here child reaches for an object, touches it, grasps it, places it over a can and releases it. Marbles, coins, blocks, clothes pins can be used. Practice 30 or 60 seconds, count objects in can and chart frequency. Aim for 100 to 120 per minute.

### Learning Channels

Not only do we teach both hands, but also in as many channels as we can on the same day. The learner must get to performance aim on each channel. A channel sequence for Reach in Big 6 flows like this:

In	Out	Abbreviation
<b>Guide</b>	<b>Reach</b>	<b>G/Reach</b>
<b>Touch</b>	<b>Reach</b>	<b>To/Reach</b>
<b>Hear-Touch</b>	<b>Reach</b>	<b>H-To/Reach</b>
<b>Hear</b>	<b>Reach</b>	<b>H/Reach</b>
<b>See</b>	<b>Reach</b>	<b>Se/Reach</b>
<b>Think</b>	<b>Reach</b>	<b>Th/Reach</b>

We do not work on one channel at a time. A learner may be working on G/Reach, To/Reach, and H-To/Reach on the same day. Work with both hands at once and chart each hand separately

### Details of Teaching Reach By Itself

- Hold object for the child to reach towards.
- Give assistance your channel stipulates.
- As soon as the child moves towards the object, move the object in another direction so the child tracks the object with their hand.
- Do not let the child make contact with the object after each reach. You want the movement to be repeated over and over again. Since grasping and manipulating the

object is a natural reinforcer you may want to build up the ratio of reaches to reinforcement when you first begin.

- Practice the reaching for a few minutes then time the child for 15 or 30 seconds counting the number of reaches.
- Chart the frequency information.
- Always give assistance at normal levels of performance. If you are guiding, you should be guiding at 200-300 reaches per minute.

### Maxi guiding

Eric and Ann did not name their super fast guiding. Conventional educators guide at about 1 per second, or 10 in 10 seconds, or 60 per minute. Even precision teachers who know of the Big 6 plus 6 work guide at low inadequate rates. Maxi guiding moves as fast as the tutor can move. That's why we call it maxi. Make those little hands blur! The word maxi guide points out that the real difference between Eric and Ann's Big 6 plus 6 and the conventional methods is maximum SPEED - 5 to 10 times faster!

Elizabeth Haughton, Eric's widow, uses these methods in her learning center in Napa, CA. Giordana Malabello in Australia, and Alison Moors and Michael Fabrizio in Seattle, use charted free operants in home tutoring programs for toddlers with autism.

### Details of Teaching Point Element

- Have objects in front of the child, on the wall, etc.
- Have child point, preferably with an outstretched finger, to each object one after another.
- Keep repeating the sequence.
- Practice for a few minutes then time for 15 or 30 seconds counting how many points.
- Chart the frequency for that hand.

### SLOBS - Conventional Wisdom

In the late 1960's, while struggling to get special education teachers to teach rapidly and use free operants I found their entrenched conventional wisdom went in exactly the opposite direction. When they ran into teaching problems they slowed down, spoke louder, did things one at a time, made things bigger, and simpler. I coined the acronym **SLOBS** to describe this

conventional wisdom that guided teaching in the wrong directions.

**S Slower**  
**L Louder**  
**O One at a time**  
**B Bigger**  
**S Simpler**

Our charts showed us that we often got steeper learning going faster, speaking softer, teaching full compounds, making things smaller, and teaching the complete final action. (Large primary pencils are too big for those little hands to draw fast.)

For most students **SLOBS** were steps in the wrong direction. Making things slower, louder, bigger, and simpler bored them to tears and did not improve their learning.

### Head Strong

From 1965 through 1972 I taught fathers of children with retardation and autism to improve their children's behavior in their homes and community. I developed a sort of theory describing these youngsters with autism. Unusually head strong, they often demanding their way to the point of demanding to sit in one seat at a restaurant table rather than any other table or seat. It is this seat right here, or you get a tantrum!

### King Floppo The First

An example of head strong was a boy we called "King Floppo the First." He had eaten until he weighed close to 200 pounds. He threw himself on the floor of his home or his school corridor when he did not get his way. Teachers had to call the fire department to move him.

### Fast

I also noticed that they self-stimulated themselves at very high frequencies - usually above 120 per minute. If finger flicking, they flicked as fast as they could in front of their eyes. I never saw a slow finger flicker. The rockers rocked as fast as they could move their bodies. When we offered them stimuli, they picked the fastest moving ones.

### Narrow Focused

Many children with autism focused on a narrow band of colors, objects, numbers, or sounds. Telephone numbers but not street numbers. All things turquoise - no other color will do.

### Head Strong, Fast, Narrow Focused Theory

After researching the behavior of children with autism from 1953 to 1965 in my Harvard Medical School Laboratory in Metropolitan State Hospital, Waltham, MA, and teaching parents from 1965 to 1972 at KU Medical Center in Kansas City, Bernie Rimland asked me what my theory of autism was. I answered, "They are very head strong, fast, and narrow focused young people." Bernie laughed and said, "That is not a theory, that is a description." And so it is. Lindsley's descriptive theory of autism.

### Free Operants Share Control

The seven free operant freedoms share control of the learning with these head strong youngsters. Because of this free operants may produce more learning than the discrete trial teaching methods.

### Free Operants Give Faster Practice

As Carl Binder has pointed out, the absence of fluency blocking trials permits fast unlimited practice which may fit better with some children's need for faster stimulation and action.

### Free Operants Give More Practice

Using free operants gives 10 to 30 times more practice a day in each skill than when the tutoring is done with discrete trials.

### Earlier the Intervention The Better

We owe Ivar Lovaas and his students enduring gratitude for demonstrating that massive early intervention can arrest and prevent later autistic behaviors (Lovaas, 1965). Without their clear cut, systematic research that has continued over the ensuing years, our free operant would be impossible.

### How much did we learn?

Now tell your neighbor what you know about precision teaching free operants. Our

listening neighbor will count out loud for each fact heard. I will start us and stop us after one minute.

Then I call for the numbers counted and chart them at the overhead projector. Comparing with our starting frequencies shows what we learned.

### Mary Had a Real Tough Child

New Lyrics to "Mary had a little lamb" written by Og Lindsley for CalABA 2000.

Mary had a little lamb,  
little lamb, little lamb.  
Mary had a little lamb,  
its fleece was white as snow.

Mary had a real tough child  
real tough child, real tough child.  
Mary had a real tough child,  
she could not teach or guide.

Then one day she raced his hands  
raced his hands, raced his hands.  
Then one day she raced his hands  
at 200 maxi guide.

That turned the trick, he's on his own,  
on his own, on his own.  
That turned the trick, he's on his own,  
and doubling every week.

He's learning all his big 6 tools,  
big 6 tools, big 6 tools.  
He's learning all his big 6 tools  
soon his fluency will peak!

### References

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- Lovaas, O. I., Freitag, G., Gold, V. J., & Kassorla, I. C., (1965). Experimental studies in childhood schizophrenia: analysis of self-destructive behavior. Journal of Experimental Child Psychology, 2, 67-84.