"Point/See/Say" or "Slide/See/Say" Learning Channels

Ogden R. Lindsley

Background
In discussing preparations for his 1994 ABA workshop on SAFMEDS with Stephen Graf on the morning of May 15, 1994, I asked Steve if he was going to describe the difference in frequency aims for SAFMEDS cards and practice sheets with the same content. Steve said, "No, I haven't planned to." I said, "I think you should because sliding the cards puts a ceiling around 70 per minute for most people." "Placing the same materials on a practice sheet will lift the ceiling to well over 100 per minute, thus doubling the fluency aim."

Our see/say rut
At this point I realized that for 25 years we have left out one of the most important learner responses in our learning channel descriptions! We have been only minimally behavioral, focusing on the immediate input channel and ignoring the learner's crucial presentation of the next stimulus.

We should have known better
We knew it was really handicapping for a teacher to turn the cards and present the stimuli to a learner. The frequency was then the teacher's and not the learner's. We also knew it was important for learners to practice fluent card sliding with "go runs" at over 60 per minute for SAFMEDS. We also knew that learners must literally point with their finger or pencil to each picture in a graphics practice sheet to develop a smooth rhythm and high frequency. But we hadn't put these important presentation responses in our channel descriptions.

Are we still S-R philosophers?
Why had we accepted this omission? Are we still saddled with the stimulus domination of the Greek philosophers? Are we still basically at heart cognitivists? Why haven't some of us working with channels and classroom learning discovered this omission? It angered me that many of us try desperately to innovate by making 2 cycle charts, 3 cycle charts, enlarged training charts, when such a basic improvement in channel description is crying to be made. The fact that younger scholars had overlooked this allows me to continue to discover.
A sample two phrase learning channel appears in the following table. Each phrase has three parts: an active, present tense verb, an adjective, and an object.

<table>
<thead>
<tr>
<th>Verb</th>
<th>adjective</th>
<th>object</th>
</tr>
</thead>
<tbody>
<tr>
<td>See</td>
<td>capital</td>
<td>&quot;A&quot;</td>
</tr>
<tr>
<td>Say</td>
<td>its</td>
<td>name</td>
</tr>
</tbody>
</table>

The full two phrase channel description was:
"See the capital 'A', and say its name."
For rapid two word description we usually described learning channel phrases with their verbs only. For example, "see/say."

A second sample two phrase learning channel appears in the following table:

<table>
<thead>
<tr>
<th>Verb</th>
<th>adjective</th>
<th>object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hear</td>
<td>letter</td>
<td>sound</td>
</tr>
<tr>
<td>Write</td>
<td>its</td>
<td>name</td>
</tr>
</tbody>
</table>

The full two phrase channel description was:
"Hear the letter sound, and write its name."
We abbreviated this to the two verbs, "hear/write."

These two phrase descriptions overlooked the fluency limiting learners' presentation response.

A sample four phrase learning channel appears in the following table. Each phrase has three parts: an active, present tense verb, an adjective, and an object.

<table>
<thead>
<tr>
<th>Verb</th>
<th>adjective</th>
<th>object</th>
</tr>
</thead>
<tbody>
<tr>
<td>See</td>
<td>practice</td>
<td>sheet</td>
</tr>
<tr>
<td>Point</td>
<td>next</td>
<td>picture</td>
</tr>
<tr>
<td>See</td>
<td>learning</td>
<td>picture</td>
</tr>
<tr>
<td>Say</td>
<td>its</td>
<td>name</td>
</tr>
</tbody>
</table>

The full four phrase channel description is:
"See the practice sheet, point to the next picture, see the learning picture and say its name."
We can abbreviate this to three verbs, "point/see/say."
("See/point/see/say" "sounds too redundant, and the first "see" is not necessary. However, "point" is crucial because it limits fluency.)
A second sample four phrase learning channel appears in the following table:

<table>
<thead>
<tr>
<th>Verb</th>
<th>adjective</th>
<th>object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold</td>
<td>SAFMEDS</td>
<td>card deck</td>
</tr>
<tr>
<td>Slide</td>
<td>next</td>
<td>card</td>
</tr>
<tr>
<td>See</td>
<td>learning</td>
<td>picture</td>
</tr>
<tr>
<td>Say</td>
<td>its</td>
<td>name</td>
</tr>
</tbody>
</table>

We use the verb "slide" rather than "turn" to describe exposing the next card because turning is a fluency limiting mistake in learning SAFMEDS decks. It takes longer to turn than to slide off cards. More importantly, the back of the card faces up when turned, and showing the answer tempts the learner to double check responses and mixes study in with practice.

The full four phrase channel description is:

"Hold the SAFMEDS deck, slide off last to show next card, see the learning picture, and say its name."

We can abbreviate this to three verbs, "slide/see/say."

("See/slide/see/say" "sounds too redundant, and the first "see" is not necessary. However, "slide" is crucial because it limits fluency.)

When we condense the descriptions into two or three easily spoken syllables for high frequency speaking, the three phrases that limit the frequency: "point/see/say" or "slide/see/say" are necessary. We can drop out the "see practice sheet" and "hold SAFMEDS deck" phrases.

For these reasons, we should always describe learning channels with three phrases abbreviated to three verbs, for example: "point/see/say" or "slide/see/say." The "point" phrases and "slide" phrases often exert more control over the frequency than do the see and say phrases. Therefore, if we must abbreviate to two verbs, they should be the necessary motor responses of the learner, for example: "point/say" or "slide/say."
In my review of Precision Teaching discoveries and effects (Lindsley, 1992) I did not mention learning channels or screening. This omission was because I relied on the memory aids of "PRACTICED MUSIC REAPS FUN" to list our major discoveries and had not put learning channels into a memory aid at that time. I still haven't. This demonstrates the down side of memory aids, and that none of us is perfect! However, I did mention learning channels in a summary article reporting contributions made by precision teachers (Lindsley, 1990).

Learning channels are not in the glossary of the *Journal of Precision Teaching*, Volume XI, Number 2, Spring 1994. Learning channels are not mentioned in the earliest text by Kunzelmann, et al, but are implicit in their list of 15 movement cycles (12 write, 2 read, and 1 say) along with four program cycle stimuli (shaping point, basic text, workbook, and teacher made) (Kunzelmann, et al, 1970, p.181).

Learning channels are briefly mentioned as a possible change procedure in an introductory text by McGreevy (1981), but they are not described. They are not mentioned by White and Haring (1980), but are implicit in their probe assessments. For example, 12 say channels and 6 write channels are in Judy's initial assessment on page 165, fig 22.

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An open meeting of the

Standard Celeration Society

Memorial Day weekend at ABA, May 1995

The Standard Celeration Society will meet at the Association for Behavior Analysis Convention in Washington, D.C. Memorial Day weekend, 1995. Plan to attend ABA and look for the Standard Celeration Society meeting time and location in the program!

Standard Celeration Society and Association for Precision Teaching members: future SCS meetings will occur regularly at each annual ABA convention. At the present time, there is no upcoming Precision Teaching conference, in Seattle or anywhere else.

SCS membership applications will be available at that time.
Learning Channel research was focused in three programs that died.

Exciting pioneering research on learning channels with emotionally disturbed and autistic children was conducted by David Keller in 1978 at Spaulding Youth Center in Tilton, New Hampshire. This research, supervised by Linda Hayes, Dave Freschi, and Ann Duncan, proved that learning of spatial relationships in one channel was independent of learning the same relationship in another channel. When the director, Wells Hively, left Spaulding, this research came to a screeching halt and has not been continued there or elsewhere.

At about the same time a private corporation, International Management Systems (IMS), developed and sold a computerized learning screening system to public school special education programs (Kunzelmann & Koenig, 1979, Koenig & Kunzelmann, 1979, Koenig & Kunzelmann, 1980). The screening was adapted from methods we had used at the University of Kansas. Briefly, pupils practiced in each of three channels for one minute on each channel every day for ten days. The channels were see/write, see/say, and hear/write. The goals were to find the channel with the steepest learning, instruct in that channel, and at the same time remediate the channel with the poorest learning. However, a series of poor business decisions forced IMS out of business.

At the time he became terminally ill, Eric Haughton was working intensely with a wide range of channels which he put into matrices in the public schools of Belleville, Ontario (Haughton, 1980, 1982). At first, 5 inputs and 6 outputs gave a matrix of 30 channels. Later, he increased the inputs to 7 (think, touch, taste, sniff, see, hear, and feel), but used a wider range of expanding motor outputs. His academic-social matrix had 11 outputs (aim, do, draw, emote, mark, match, say, select, tap, think, and write) for a total matrix of 77 channels. His activity matrix had the 7 inputs with 9 outputs (wave, aim, tap, squeeze, get, pump, rub, shake and twist) for a matrix total of 63 activity channels. His mobility matrix had the 7 inputs with 13 outputs (roll, creep, crawl, scoot, cruise, walk, run, gallop, hop, jump, leap, slip, and slide) for a total matrix of 91 channels!

The Morningside Model of Generative Instruction developed by Kent Johnson combines Direct Instruction with Precision Teaching methods and produces two grade levels in academic gain in only 16 to 18 hours of instruction (Johnson & Layng, 1992). This model uses fluency in see/say channels to produce generative effects in see/write channels.

Recently in my one-day introductory Standard Celeration Chart workshops participants spent the morning in paced, choral, point/see/say reading of Standard Celeration Chart practice sheets. By 2:00 in the afternoon all participants charted (see/write) from spread sheets above 5 dots correct per minute.

Haughton urged further research to learn the interactions among learning channels. In his seminal article, he also reported the first use of thirty-second sprints (Haughton, 1980). Eric’s untimely death halted this promising research which, by all means, should be continued by someone. It would make excellent master’s theses, doctoral dissertations, or fine government grant proposals.
References


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