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Learning Channels Next: Let's Go! Ogden Lindsley

Learning channels

- We have used learning channels since 1969. I named them in 1974. Since 1980 very little research has been done on them. This brief note describes their neglect, and their promise, and urges us to use and study them more.

Throughputs not inputs and outputs

- In 1974 we designed Learning Channels (LC) as functional throughputs following the operant reflex as a unit rather than an S-R connection.
- Our data prove LCs are units. If Sandra learns to seesay, to seewrite, and to heardo letters. Sandra has not learned to see letters, for she may not know how to seedo. This proves that Sandra has not learned one input and three outputs. Seesay, seewrite, heardo, and seedo function as four separate actions, four reflexes, four throughputs, four channels.
- A learning channel has no input. Its "in" does not put anything. Its "in" is merely one end, its entrance, or "in" for short. The other end is merely its exit, its outlet, or "out" for short - not an output.

Accomplished PTers slip back to the Greeks

- Overcoming 2,000 years of cultural input-output based analysis from the ancient Greeks to modern neurologists and sensory psychologists makes it difficult for us to maintain functional channel descriptions.
- When we deviate we slip back to the input-output tradition. Some of us have incorrectly called the see an input channel and the say an output channel.

Naming learning channels

- We named Learning Channels using active verbs: (hear, see, do, say, write).
- We fully named channels using active verbs with their objects and adjectives: (See the capital A say its name, or See the capital A say its sound).

Writing learning channels

- First we used a forward slash between the channel in and out: see/say. Some used a dash: see-say. Others used "to": see to say. All these show Greek input - output traces not yet completely removed.
- Simply combining the in and out as one word signifies channel unity and uniqueness: simply seesay, seewrite, seedo and heardo. Seesay types more easily than see/say. Seesay fits modern naming (Microsoft, Applesoft) better than does see/say.
- The meaning and order of the verbs alone fully describe the learning channel.

Naming yoked channels

- The Houghton Learning Center has found channel yoking very powerful. As we further research yoking we will need clear, standard yoking terms.
 - Seedosay can only mean an out yoked learning channel with one in (see) and two outs (do and say) performed together.
 - Hearseesay can only mean an in yoked learning channel with two ins (hear and see) presented together and one out (say),
 - Hearseedosay can only mean a double yoked channel with two together ins (hear and see) and two together outs (do and say).
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Together and sequenced yoking

- When presented together write the two ins in alphabetical order as hearsee.
 - When presented in sequence write the two ins in presentation order as hear-see (said "hear then see"), or see-hear (said "see then hear").
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Best entry channels

- To start a learning sequence, many of us have found hearsay the friendliest channel. People like to do it, don't mind error, and become fluent rapidly.
 - Full yoking with hearseedosay, may be the most friendly. We need research to find the best entry channels for different curricula content and levels.
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Independent learning from paired channels

- All our results show independent learning of paired channels. (Three curricula: Johnson, 1969; two curricula: Duncan, Haines, Keller, 1978)
 - Pairing three channels with different content in different timings each day can be used to screen performance and learning (Koenig & Kunzlemann, 1980).
 - This independent learning in three or more channels at once means we can screen curricula and methods rapidly without baselines or control groups.
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Look at both freq and cel when choosing channels

- When screening with learning channels we must have enough timings to get celerations in each channel. Most have used ten days (two weeks) with a one-minute timing each day in each channel.
 - The channel with the highest frequency (performs best in) is not always the one with the steepest celeration (learns best in).
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Teach in strongest and weakest

- Teach content in strongest channel, while remediating the weakest channel
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Computer voice in and voice out

- Until recently computers have not refreshed screens fast enough to permit high fluencies. They also have been limited to the seetype channel.
 - New machines being developed permit real time voice out (heartype) and voice in (seesay, or hearsay channels). Many channels become available.
 - For the first time, we can then use computers to teach and study more than the dominant seetype channel which required fluent keyboarding tool skill.
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Promise of Learning Channels

- It looks like many researchers are on the fluency research band wagon.
 - Double proving the facts of fluency is not really necessary. It may bring academic acceptance, but will produce little discovery.
 - Researching the presence of agility in celeration will produce discoveries.
 - Research into the relative powers of learning channel yoking, pairing, and sequencing will also produce more learning power and more discoveries.
 - Our future is more knowledge of celeration and learning channels! Let's go.
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