Building Fluent Skills and Knowledge with Efficient Practice Activities

Presenter
Dr. Carl Binder has been a leader in instructional design and human performance technology for over 25 years, and is especially known for his development of fluency-based performance systems. He publishes and speaks to diverse audiences and provides strategic performance consulting to private and public sector organizations.

Session description
A simple three-stage model of learning divides the process into initial learning (to accuracy), practice (to build fluency and endurance), and application (to ensure final performance). Most training programs skip the second stage, expecting learners to leap from the hesitant performance produced in initial learning to confident application, without having a chance to build fluency in critical skill and knowledge components. This is a highly inefficient, and often ineffective approach that generally fails to produce desired changes in job performance. In this session, participants will learn:

- when and why fluency should be a program objective
- practical guidelines and templates for building fluency, and
- how to include fluency practice in classroom, self-study, and coaching programs.

The session will provide examples and present principles from over 25 years of research and development in behavioral science, education, and corporate performance improvement programs.

Additional resources
Here are some additional sources of information about fluency-based design:

Web site
- www.Binder-Riha.com, where you'll find articles, references, and more.

Published Articles

Recent Chapter

Binder Riha Associates 2300 Bethards Drive Suite G Santa Rosa, CA 95405 1-800-FLUENCY
**Fluency = Accuracy + Speed = True Mastery**

<table>
<thead>
<tr>
<th>Category</th>
<th>Fluency Blockers</th>
<th>Fluency Builders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement</td>
<td>Measurement procedures that ignore the time dimension.</td>
<td>Time-based performance measurement and evaluation.</td>
</tr>
<tr>
<td></td>
<td>Measurement procedures with too few response opportunities for the allotted time.</td>
<td>More response opportunities than an expert can complete in the time allowed.</td>
</tr>
<tr>
<td>Procedures</td>
<td>Too few practice opportunities.</td>
<td>Sufficient practice to attain fluency.</td>
</tr>
<tr>
<td></td>
<td>Preventing learners from moving at their own pace.</td>
<td>Self-paced learning and practice procedures.</td>
</tr>
<tr>
<td></td>
<td>Limited response opportunities per minute.</td>
<td>Many opportunities per minute for active responding.</td>
</tr>
<tr>
<td></td>
<td>Emphasis on preventing errors during learning.</td>
<td>Treating errors as “learning opportunities.”</td>
</tr>
<tr>
<td>Materials</td>
<td>Too few examples.</td>
<td>Many examples.</td>
</tr>
<tr>
<td></td>
<td>Materials that are difficult to use, waste paper, movement, etc.</td>
<td>Easy-to-manipulate or use, efficient use of paper, space and movement.</td>
</tr>
<tr>
<td></td>
<td>Unnecessarily wordy worksheets and directions.</td>
<td>Succinct worksheets and directions.</td>
</tr>
<tr>
<td></td>
<td>Difficult-to-read and comprehend.</td>
<td>Easy-to-read and comprehend.</td>
</tr>
<tr>
<td>Skill Elements</td>
<td>Critical steps in procedures or chained skills that are not fluent.</td>
<td>Fluent steps in procedures.</td>
</tr>
<tr>
<td></td>
<td>“Tool” skills or elements that are not fluent.</td>
<td>Fluent “tool” skills or elements.</td>
</tr>
<tr>
<td>Knowledge Elements</td>
<td>Prerequisite knowledge that is not “second nature” or fluent.</td>
<td>Fluent prerequisite knowledge (facts, concepts, structures, principles, classifications or processes.)</td>
</tr>
<tr>
<td></td>
<td>Inability to fluently locate critical information.</td>
<td>Ability to use reference systems or job aids fluently, confidently.</td>
</tr>
</tbody>
</table>

For more information about the FluencyBuilding™ methodology, including published articles and research reviews, or to discuss on-site workshops for your organization, call 1-800-FLUENCY(358-3629) or visit www.Binder-Riha.com.

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Training '99 - Building Fluent Skills & Knowledge

Building Fluent Skills and Knowledge with Efficient Practice

Dr. Carl Binder
Binder Riha Associates
www.Binder-Riha.com

Agenda
- Background: Mine and Yours
- What IS Behavioral Fluency?
- The Research: WIFM?
- Designs for the Three Stages of Learning
- Guidelines for Building Fluent Performance
- Implementing Fluency-based Programs
- Questions and Discussion

What is Behavioral Fluency?
- You will have exactly 1 minute.
- Write (abbreviate) as many words or phrases as you can think of in association with this term.

Kindly don’t start......

...until I say......

 "Please begin!"

Fluency: The Definition of Mastery

Fluency = Accuracy + Speed
  = Quality + Pace
  = Doing the Right Thing without Hesitation
  = Automatic or "Second Nature" Response
  = True Mastery

Levels of Performance

Fluency (True Mastery: accuracy + speed)
  Practice makes the difference!

100% accuracy (traditional "mastery")

Beginner's level (inaccurate and slow)
Incompetence (no measurable performance)
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Michael Jordan on Practice

"If you want to get better at anything, you have to practice. There's no other way to do it. For me practicing is fun. I enjoy improving myself, and I enjoy developing new skills."

Michael Jordan, 1991

Research on Fluency

- Retention and maintenance of skills and knowledge
- Endurance, attention span, resistance to distraction
- Application or transfer of training on the job and in subsequent learning

Key Learning Outcomes

Design for Stages of Learning

Each requires different procedures and materials.

Acquiring New Behavior

- Focus on getting it "right"
- Well-understood learning/teaching procedures:
  - Rules and strategies
  - Examples and non-examples
  - Fading out models, prompts, and cues
- Often tightly controlled by instructor or materials
- Usually slow, relatively few active response opps.

Most training accomplishes this stage fairly well.

Practicing components for fluency and endurance

Applying and combining fluent components

Practice for Fluency and Endurance

- Focus on quickness, smoothness, confidence.
- Practice component skills and knowledge before combining them into larger "chunks."
- Use multiple brief practice durations at first.
- Lengthen practice after achieving fluency in short intervals.
- Provide many opportunities for active responding.
- Shift to self-managed and self-measured practice.

Often skipped - going straight to Application!

Applying & Combining Fluent Components

- Focus on behavior that reflects "real" performance.
- Arrange opportunities to use fluent components to solve problems, be creative, perform work.
- Use case studies, simulations, games, projects, etc.
- Diagnose problems by identifying missing components.
- Eliminate learning problems with component practice.
- Build "higher order" skills and knowledge on a foundation established in Stage Two.

Learners lacking fluent components experience failure.
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Build fluency when...

...you need performance out-of-the-chute.
...comprehension depends on fluent prerequisites.
...non-fluent components constrain performance.
...application requires creativity or problem-solving.
...performers must resist distraction or fatigue.
...they must learn to use a job aid or user interface.
...a job requires confidence.
...you want expertise, not merely awareness.

Fluency Blockers and Fluency Builders

- Measurement of performance and learning
- Procedures for learning and practice
- Materials for learning and reference
- Skill elements
- Knowledge elements

Features of Learning and Performance Systems that Can Either Prevent or Ensure Fluency.

Ray Charles on Practice

ROBERT SIEGEL: You practice a lot?
RAY CHARLES: Whenever I can. I don't -- I don't practice as much as I would like, because I'm not working that hard all the time. But I say, you know, I try to practice a little bit every day for the small part.
ROBERT SIEGEL: And when you do practice, I mean, do you practice the tunes that you'll be playing in the near concerts?
RAY CHARLES: Oh, no. No, no, no, no, no, no, no, no, no.
ROBERT SIEGEL: I know the answer to my next question.
RAY CHARLES: No. No, I practice things like scales and arpeggios and movement of my hands and things like that. Because, I mean, I-- I'm-- I'm-- not going to play in stage. I know...'

ROBERT SIEGEL: Right.

Ray Charles: Silversun on National Public Radio
Celebrating Ray Charles 50 years of Recording
September 22, 1997

Practice -- Don't Roleplay!

- Define clear time-based fluency benchmarks.
- Focus practice on key performance components.
- Combine performance and knowledge components after building fluency, not before.
- Provide opportunities for repeated, intensive practice in brief intervals over days or weeks.
- Plan/support self-monitored practice, working with colleagues and managers as "coaches", a learning gym, fun activity.

Learning Channels

<table>
<thead>
<tr>
<th>SAY</th>
<th>WRITE</th>
<th>ABBREVIATE</th>
<th>TYPE</th>
<th>TAP</th>
<th>MARK</th>
<th>DO</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEE</td>
<td>TOUCH</td>
<td>SNiff</td>
<td>TASTE</td>
<td>NEAR</td>
<td>FREE</td>
<td></td>
</tr>
</tbody>
</table>

Where did cramming ever get you?
(......after the exam!!)
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Example: Sales Knowledge

- Exercises
  - See/Say facts and associations from cards
  - Free/Say rapid recall facts
  - Hear/Say answers to questions and objections
  - Free/Say make brief presentations on topics
- Results
  - New hires know more than experienced reps
  - Increased cross-selling
  - Improved ramp-up to sales goals

Example: Customer Care Call Center

- Exercises
  - See/Say cards with basic facts and screen codes
  - Free/Say rapid recall key facts
  - Hear/Say responses to questions
  - See/Do apply job aids to diagnose problems
- Results
  - Training required less time, was more fun
  - New hires passed tests at higher levels than experienced reps
  - New hires hit benchmarks second day on job

Errors as Learning Opportunities

"You fall a thousand times. You don't learn anything if you don't fall."
Scott Hamilton
Champion Figure Skater
1998 Olympics, Nagano
TV Commentary

Key Questions for Analysis

- What do performers do?
- What must they know fluently?
- What must they be able to look up fluently?

Implementation Planning

- Identify factors needed to ensure successful participation in:
  - Self-managed study and practice
  - Course activities, and
  - Application on the job
- Obtain VISIBLE support from Management to provide Accountability, Coaching, and Incentives
- Move toward a Culture of Practice.

The Six Boxes™
(Controllable Behavior Influences)

- Expectations & Feedback
- Tools & Resources
- Consequences & Incentives
- Skills & Knowledge
- Selection & Assignment
- Motives & Preferences

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The Rehabilitation of Practice

- Reasons traditional "drill & practice" fails:
  - lacks explicit fluency criteria as practice goals
  - long durations stretch endurance and attention
  - often the "chunks" are too big
- Reasons well engineered practice succeeds:
  - explicit time-based practice goals drive motivation
  - brief practice durations allow peak performance
  - builds fluent elements before application

Fluency and Evaluation

1. Reaction: Fluency is fun! It builds confidence.
2. Learning: Measure fluency for big gains.
3. Performance on the job: Links time-based fluency goals to job performance requirements.
4. Business results: Improved sales, marketing, and bottom-line results. Reduced costs.

"Fluency bridges the gap between learning and performance."

- Carl Binder
Selecting Practice Activities for Sales and Service Workers

Introduction

Here is a tool that will help you select among common activities for sales and service workers.

START HERE

Does the performance require fluent access or fluent knowledge?

<table>
<thead>
<tr>
<th>Access</th>
<th>Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Yes</td>
</tr>
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</table>

Are job aids and documents structured to support efficient performance?

<table>
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<tr>
<th>No</th>
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<tbody>
<tr>
<td>Yes</td>
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Build an easy-to-access reference base with job aids, structured documentation and/or efficient online access technology.

Provide timed practice exercises and assessment using the tools and reference base to ensure fluent access.

ALSO CONSIDER THIS

Is there a need for fluent skills?

<table>
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<tr>
<th>No</th>
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<tbody>
<tr>
<td>Yes</td>
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Break down skills to the appropriate chunk size and provide practice not "role play."

Does the required knowledge include basic facts and associations?

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<th>No</th>
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<tbody>
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<td>Yes</td>
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Use SEE/SAY practice cards or ThinkFast™ plus FREE/SAY rapid recall exercises.

Use SEE/SAY or HEAR/SAY Q & A exercises.

Does the required knowledge include responses to tough questions or objections?

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<thead>
<tr>
<th>No</th>
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<tbody>
<tr>
<td>Yes</td>
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Use SEE/SAY or HEAR/SAY brief presentation exercises and/or fluency aids exercises.

Provide opportunities to practice segments of presentations or demes.

Does the required knowledge include speaking briefly about one or more topics?

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<tr>
<th>No</th>
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<td>Yes</td>
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Use SEE/SAY or HEAR/SAY brief presentation exercises and/or fluency aids exercises.

Provide opportunities to practice segments of presentations or demes.

Does the required performance include giving presentations or demonstrations?

<table>
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<th>No</th>
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<tbody>
<tr>
<td>Yes</td>
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Provide opportunities to practice segments of presentations or demes.

Use case study application exercises to integrate and demonstrate combinations of skills and knowledge.

Do you want to ensure fluent application of component skills and knowledge in more complex performance?

<table>
<thead>
<tr>
<th>No</th>
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