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
- Binder, C. Behavioral Fluency: Evolution of a New Paradigm, *The Behavior Analyst*, Fall, 1996
- Binder, C. Fluency: A New Paradigm: *Educational Technology*, October, 1993.
- Binder, C. Closing the Confidence Gap, *Training*, September, 1990.
- Binder, C., and Bloom, C. Fluent Product Knowledge: Application in the Financial Services Industry. *Performance & Instruction*, February, 1989.
- Snyder, G. Training to Fluency: A Real Return on Investment. *Performance Management Magazine*, Summer, 1992.

Recent Chapter
- Binder, C. Fluency Development. In Langdon, D.G., Whiteside, K.S., and McKenna, M.M. (Eds), *Intervention Resource Guide*. San Francisco: Jossey-Bass, 1999.

Fluency = Accuracy + *Speed* = True Mastery

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

Building Fluent Skills and Knowledge with Efficient Practice

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Agenda

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

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Nice to Meet You! What do YOU do?

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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!"

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Fluency: The Definition of Mastery

Fluency = Accuracy + Speed

   = Quality + Pace

   = Doing the Right Thing without Hesitation

   = Automatic or "Second Nature" Response

   = True Mastery

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Levels of Performance
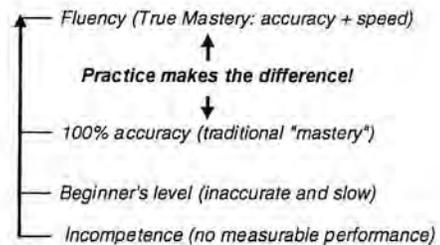
— *Fluency (True Mastery: accuracy + speed)*

  ↑
  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
Television Spot

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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

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Design for Stages of Learning

- Applying and combining fluent components
- Practicing components for fluency and endurance
- Acquiring new behavior
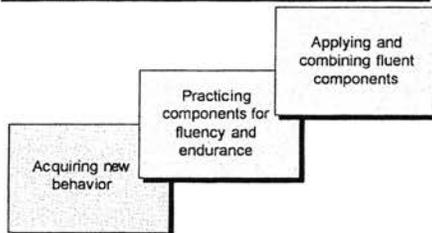
Each requires different procedures and materials.

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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.

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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!

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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.

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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.

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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 to, because I'm not around a big piano all the time. But I try to, you know, I try to practice a little bit every day for the most part.

ROBERT SIEGEL: And when you do practice, I mean, do you practice the tunes that you'll be playing at the next concerts......?

RAY CHARLES: Oh, no, no, no, no, no, no, no, no, no, no.....

ROBERT SIEGEL: I guess the answer is no, you're saying?

RAY CHARLES: No. No. I practice things like scales and chords and movement of my hands and things like that, because, I mean, I -- what I'm going to play on stage, I know. What I'm practicing for is to try to improve what I might play, you know. You gotta practice. I mean you gotta keep your fingers loose, you gotta keep your mind active, you know, because what your mind think of -- the question is: what your mind think of, can your fingers play it?

ROBERT SIEGEL: Right.

Interview on National Public Radio Celebrating Ray Charles 50 years in recording September 23, 1997

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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, work with colleagues and managers as "coaches", a learning gym, fun activity.*

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Where did cramming ever get you?
(.....*after* the exam?!)

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Learning Channels

IN \ OUT	SAY	WRITE	ABBREVIATE	TYPE	TAP	MARK	DO.....
SEE							
TOUCH							
SNIFF							
TASTE							
HEAR							
FREE							

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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

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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

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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

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Key Questions for Analysis

- What do performers DO?
- What must they KNOW fluently?
- What must they be able to LOOK UP fluently?

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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.

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The Six Boxes™
(Controllable Behavior Influences)

	Expectations & Feedback	Tools & Resources	Consequences & Incentives
ENVIRONMENT			
EMPLOYEE	Skills & Knowledge	Selection & Assignment (Capacity)	Motives & Preferences (Attitude)

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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*

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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 Four Levels

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"Fluency bridges the gap between learning and performance."

- Carl Binder

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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*?

— access → Are job aids and documents structured to support efficient performance?
— — no → Build an easy-to-access reference base with job aids, structured documentation and/or efficient online access technology.
— — yes → Provide timed practice exercises and assessment using the tools and reference base to ensure fluent access.

— knowledge ↓

Will the performer need to *say* the knowledge?
— no → Use SEE/WRITE or SEE/MARK written practice sheets.
— yes ↓

Does the required knowledge include basic *facts* and *associations*?
— yes → Use SEE/SAY practice cards or ThinkFast™ plus FREE/SAY rapid recall exercises.

— and/or ↓

Does the required knowledge include responses to tough questions or objections?
— yes → Use SEE/SAY or HEAR/SAY Q & A exercises.

— and/or ↓

Does the required knowledge include speaking briefly about one or more topics?
— yes → Use SEE/SAY or HEAR/SAY brief presentation exercises and/or fluency aids exercises.

— and/or ↓

Does the required performance include giving presentations or demonstrations?
— yes → Provide opportunities to practice segments of presentations or demos.

— and/or ↓

Do you want to ensure fluent *application* of component skills and knowledge in more complex performance?
— yes → Use case study application exercises to integrate and demonstrate combinations of skills and knowledge.

ALSO CONSIDER THIS

Is there a need for fluent *skills*?
— yes ↓
Break down skills to the appropriate chunk size and provide *practice* not "role play."