Session Handouts





# 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."

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Michael Jordan, 1991

# Examples: Applications and Results Great Falls Precision Teaching Project (Ray Beck) 30 mins per day of timed practice and charting 20-40 percentile point increase in 3 years Behavior Prosthesis Lab Classroom (Carl Binder) Severely disabled students learned self-care and vocational skills never before successfully taught Morningside Academy (Kent Johnson) Intensive program including PT, DI, etc. 2-3 grade levels improvement per year Product Knowledge Systems, Inc. (Carl Binder) Daily practice for 2 weeks by sales people Graduates "better than 5 years of experience"

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	Examples: N	/le	asurement
	Disabled Students		Sales Professionals
•	Teaching sight reading to disabled students Rapidly achieved 100% correct "ceiling" But only 12/min correct (adults read 250/min) Shift to fast-prompted worksheets: <i>instantly</i> jumped to 36 / min, higher with practice	•	Teaching "facts" on cards to Dun and Bradstreet sales people Initial goal was 100% correct on 35 cards for 2 min time limit "Topped out" at 17/min Changed limit to 1 min Felt "challenged" and reached 35 / min

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Examples: Procedures		
Second Grader	Corporate Trainees	
<ul> <li>7-year old worked on add fact flashcards</li> <li>Student flipping cards, topped out at 14 per minute</li> <li>Mother flipping cards, student instantly did 32 per minute and increased with practice</li> </ul>	<ul> <li>Adult trainees in workshop brainstormed ideas one at a time with facilitator: 8 per minute (25 total responses)</li> <li>Trainees abbreviated ideas on paper first for one minute, then shared: 12 per minute (72 total responses)</li> </ul>	

Examples: Materials				
Institutional Residents	Customer Service Reps			
<ul> <li>Disabled students count out objects to match numbers in teacher- presented trials: 3 / min</li> <li>Teacher arranges cups with numbers written on them, prompts students to count objects into cups to match numbers: jumps to 9 / min and accelerates.</li> </ul>	<ul> <li>Customer service professionals locate answers to questions in typical 3-ring binder of documents: find 3 correct and 2 incorrect answers in 10 mins</li> <li>With re-organized structured reference book: 19 correct and 1 error in 10 mins</li> </ul>			

Examples: Skill Elements			
Autistic Students	Public School Students		
<ul> <li>Autistic students unable to acquire vocational assembly task using chaining procedure</li> <li>Practiced components in isolation to within 30- 50 per minute range</li> <li>Students then acquired</li> </ul>	<ul> <li>Elementary students "top out" writing math fact answers at 20/ min</li> <li>Practice writing 0 - 9 digits (and tallies) to 100 per minute</li> <li>Return to daily practice math facts, accelerates</li> </ul>		
chain with minimal prompting	<ul> <li>to 50-60 per minute</li> <li>(Alternative: "say" facts)</li> </ul>		





- · Always include time-based mastery criteria.
- Devise procedures that "get out of the way" of learners, allow them to move as quickly as they can.
- Create materials and ergonomics that allow smooth, efficient interaction (test them yourself!)
- Diagnose component behavior deficits and remediate or "work around" them(i.e., use other response modes).
- Be sure verbal behavior and discriminations ("knowledge") do not slow down performance.
- Be skeptical of "attention deficit" diagnoses.
- · Be clever, creative, "out of the box" in your designs.





## Fluency = Accuracy + *Speed* = True Mastery

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

For more information about the research-based FluencyBuilding<sup>™</sup> methodology, including published articles and research reviews, or to discuss on-site workshops for your organization, contact Dr. Carl Binder at (707)578-7850 or CarlBinder@aol.com.

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Input /Output:	Performance Statement:
Consultant - Analyst:	Organization: Date:
Category / Criteria	Practice Parameters / Improvements
Measurement: accuracy + speed	
Time dimension?	
<ul> <li>Responses fill timing period? (don't "run out")</li> </ul>	
Doesn't stretch endurance?	
Procedures	
Many opportunities?	
Self-paced?	
<ul> <li>Many opportunities per time unit?</li> </ul>	
Minimizes error slow-down?	
Materials - Environment	
Many examples?	
<ul> <li>Easy to use / good ergonomics?</li> </ul>	
Clear effective directions?	
Easy to read / comprehend?	
Skill Elements	
<ul> <li>Fluent steps / components?</li> </ul>	
Fluent tool skills?	
Knowledge Elements	
Fluent discriminations?	
Fluent verbal prerequisites?	
<ul> <li>Fluent access to critical information / reference systems?</li> </ul>	
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