

# Practical and Curriculum Considerations in Setting Up Home Based ABA Programs

Workshop: Trinity College, Dublin

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# A little History:

- The majority of studies investigating the effectiveness of Early Intensive Behavioural Intervention are based on home-programmes.
- Lovaas et al., 1973. Some Generalization and Follow-Up Measures on Autistic Children in Behavior Therapy.
- Change in “locus” of intervention

# Further evidence for home-based EIBI: outcome studies

- **General Outcome Studies 1985-2005**
- 1. Fenske, Zalski, Krantz, & McClannahan (1985)
- 2. Lovaas (1987)
- 3. Anderson, Avery, DiPietro, Edwards, & Christian (1987)
- 4. Harris, Handleman, Gordon, Kristoff, & Fuentes (1991)
- 5. Birnbrauer & Leach (1993)
- 6. Sheinfopf & Siegel (1998)
- 7. Weiss (1999)
- 8. McGee, Morrier, & Daly (1999)
- 9. Koegel, Koegel, Harrower, & Carter (1999)
- 10. Smith, Groen, & Wynn (2000)
- 11. Eikeseth, Smith, Jahr, & Eldevik (2002)
- 12. Stahmer & Ingersoll (2004)
- 13. Howard, Sparkman, Cohen, Green, Stanislaw (2005)
- 14. Reed et al. (2005)

# Important considerations:

- Age at intake
- Intensity
- Frequency of supervision
- Staff training
- **Comprehensive curriculum**
- **Eclectic (but evidence based) practices**

# Practical Considerations: Age at intake

- Harris & Handleman (2000). Age and IQ at Intake as Predictors of Placement for Young Children with Autism: A Four- to Six-Year Follow-Up
- Should pre-school children be the only ones to access home based programmes?
- Currently no outcome research on effectiveness of home based programmes with school-aged children
- Eikeseth et al. (2002). Intensive School-based Behavioral Treatment at School for Four to Seven Year Old Children with Autism

# Practical Considerations: Intensity

- The age of the child is likely to direct the intensity of intervention
  - Preschool age: mainly home-based
  - School age: concurrent interventions in school and home settings
  - Parental involvement: is it realistic to expect parents to carry out teaching sessions?

# Practical Considerations: frequency of supervision

- Lovaas (1987): weekly
- Other studies: variable (fortnightly, monthly, quarterly) or unspecified
- General practice: variable, dependant upon funding
- SCAmP: fortnightly for team meetings, additional hands on tutor training on a weekly basis or as necessary

# Practical Considerations: Staff training

- Lovaas (1987): tutors were students at UCLA who had attended a semester of a Behaviour Modification course
- General Practice: variable, no consistent model. One to two days initial hands on workshop with some theory. Hands on training provided in team meetings. Access to additional training dependant on funding
- SCAmP: 3 days theoretical training. 2 days practical training. Tutor trainer specifically assigned to provide further hands on training. Compulsory tutor attendance to additional classes.

# Starting an EIBI Home Programme

## ➤ Baseline assessments:

- *Standardised*
  - Measures of adaptive functioning
  - Scales of Intellectual Development
  - Non-verbal measures
  - Verbal Measures
- *Non standardised*
  - ABLLS and other checklists

# The first steps: COMMUNICATION

ECHOIC



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graph TD; ECHOIC --> YES; ECHOIC --> NO; YES --> Vocal[Vocal Communication]; NO --> AAC[Alternative Augmentative Communication];
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YES

Vocal Communication

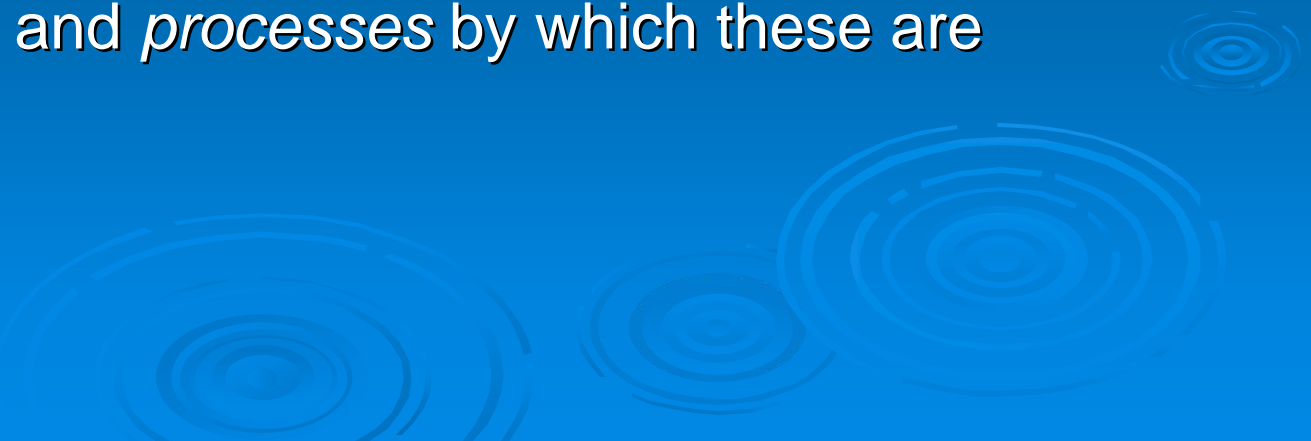
NO

Alternative  
Augmentative  
Communication

# Practical considerations: which curriculum?

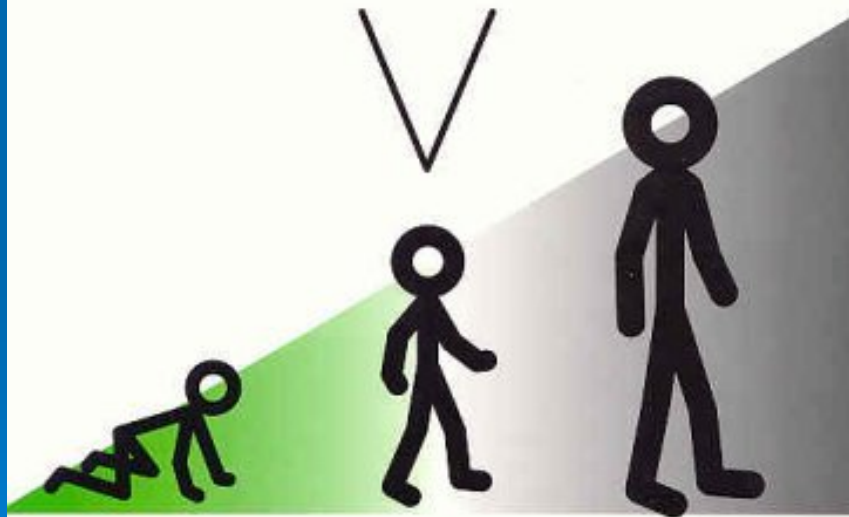
- Will this depend on the “model” of ABA chosen?
- Which curricula are available?

# What a curriculum should do:

- Provide a guide on skills sequence *intra* and *inter* developmental domains
  - Be developmentally based (developmental norms)
  - Reconcile the developmental literature with the behavioural and educational research for teaching skills
  - Describe skills and *processes* by which these are acquired
- 

# Teaching Individuals with Developmental Delays

Basic  
Intervention  
Techniques



O. Ivar Lovaas

# Teaching Individual with Developmental Delays.

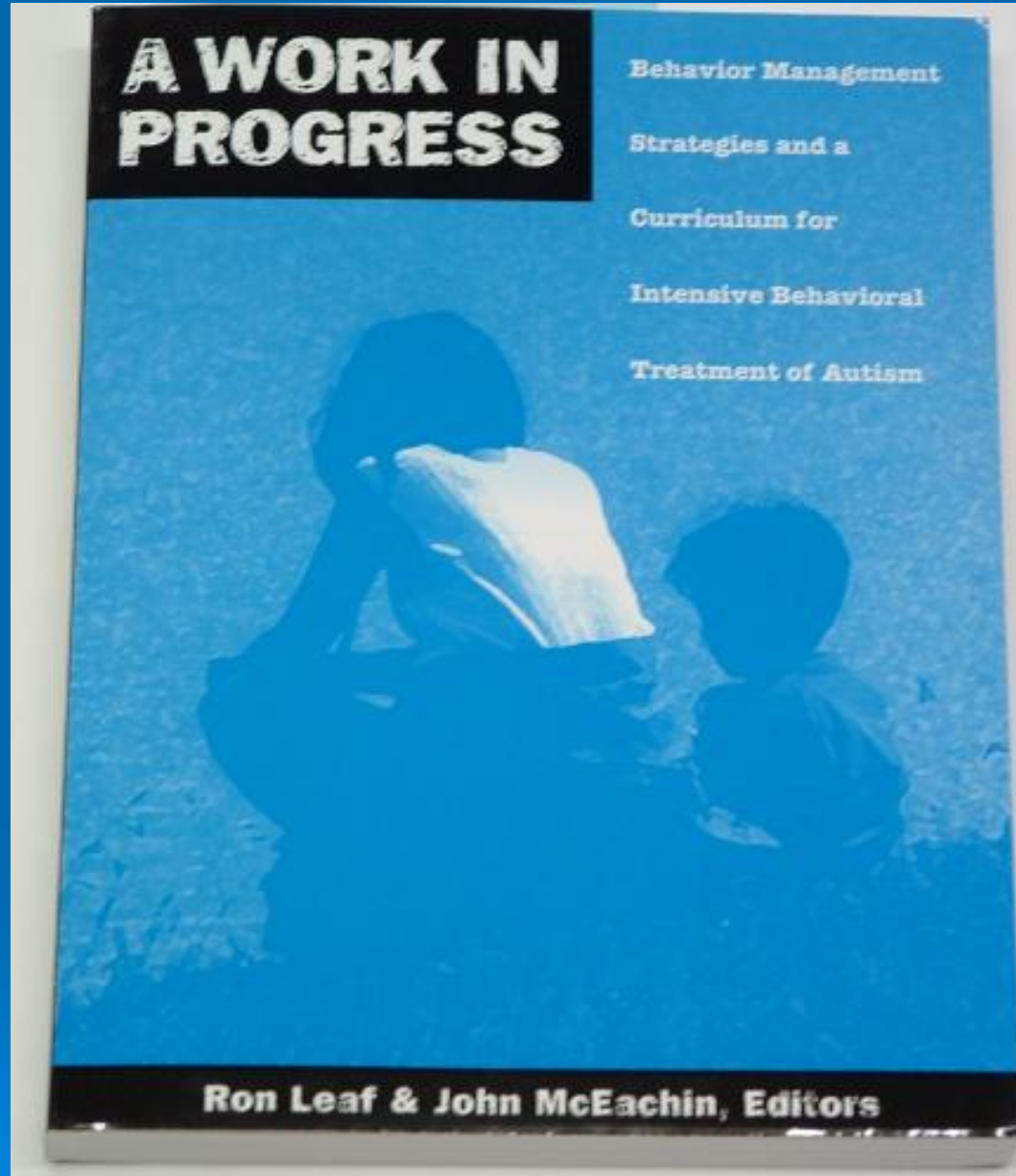
*O.I. Lovaas*

- Sequel to the “ME book”
- It describes general teaching procedures
- Large section on the “Reading and Writing program”.

# **A WORK IN PROGRESS**

*Behavior Management  
Strategies and a  
Curriculum for  
Intensive Behavioral  
Treatment of Autism*

**Ron Leaf & John McEachin, Editors**



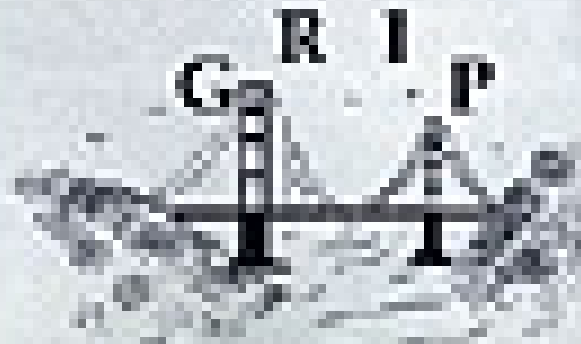
# A Work in Progress

## *R. Leaf & J. McEachin*

- Most developmentally based
- Lists skills within domains
- Some chapters describing procedures for teaching certain skills

# INDIVIDUALIZED GOAL SELECTION CURRICULUM

Edward G. Rosenzweig, Ph.D.,  
Mary Anne Lockwood, Ph.D., Ed.D.,  
and Linda Marie, M.Ed.



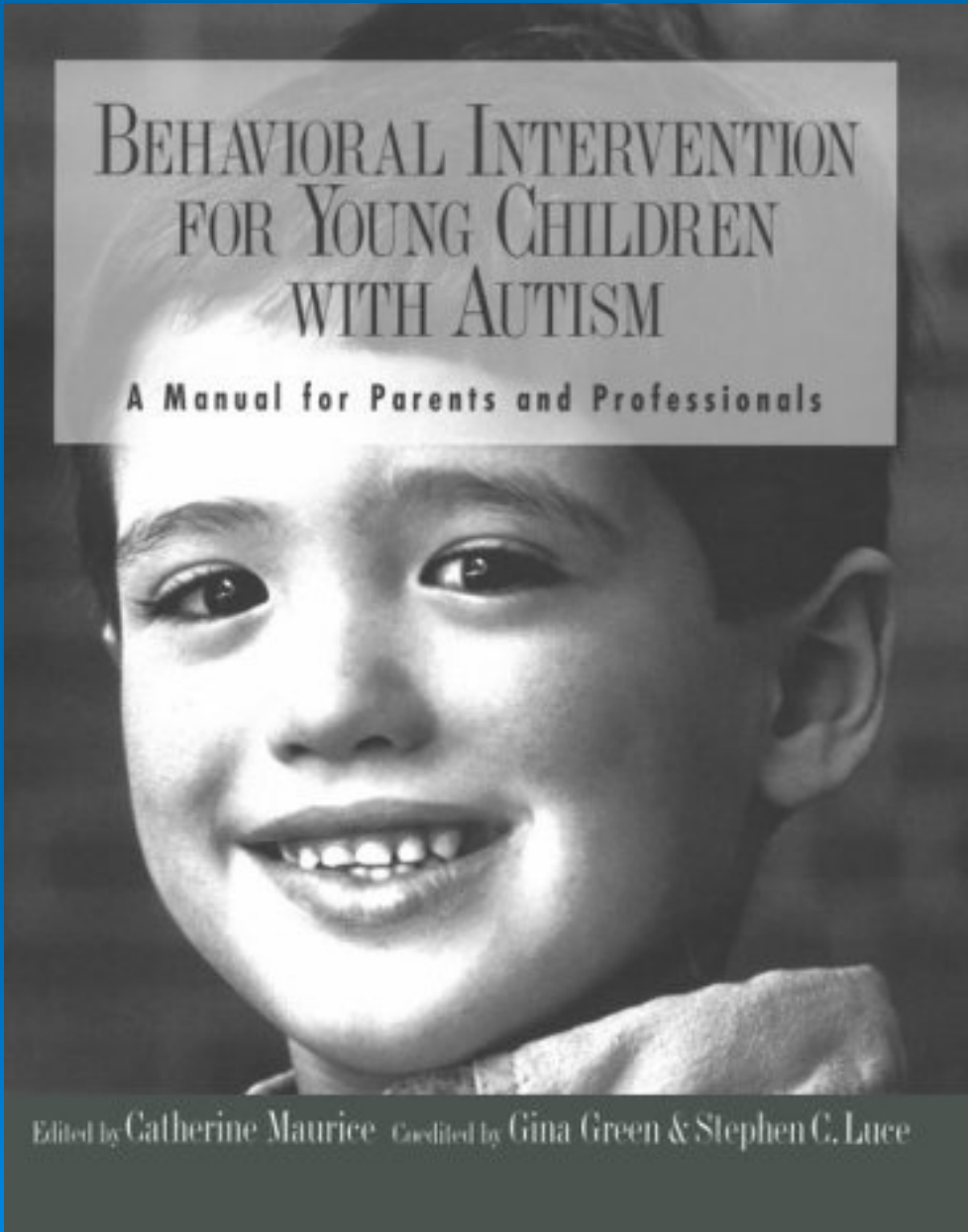
- Career
- Education
- Health/Physical
- Personality

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# Individualized Goal Selection Curriculum

*R., Romanzcyck*

- Meticulous task analysis of behavioural chains
- Lists specific skills within domains
- Excellent guide for objective selection



BEHAVIORAL INTERVENTION  
FOR YOUNG CHILDREN  
WITH AUTISM

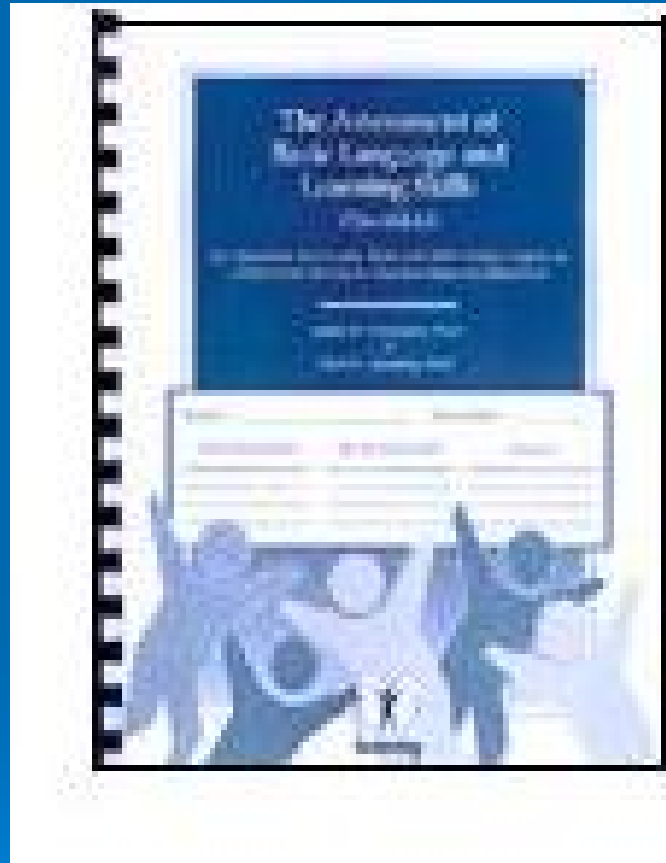
**A Manual for Parents and Professionals**

Edited by Catherine Maurice Co-edited by Gina Green & Stephen C. Luce

# Behavioural Intervention for Young Children with Autism

*C. Maurice*

- One of the most famous and widely used
- Describes programmes with specific teaching procedures
- Lists prerequisites within each programme



> [Copy of ABLLS.xls](#)

# The Assessment of Basic Language and Learning Skills (ABLBS)

*M. Sundberg & J. Partington*

- Lists skills across domains
- Language categorised within verbal operants (first page)
- A section on communication (manding)
- But is it a curriculum?

# Criticisms:

- Neither is research based
- Neither is based on normal sequences of development
- The basic premise appears to be that skills should be accumulated one after another in almost vertical fashion
- Little attention to stretching skills laterally or explanation of pre-requisites

# Are curricula really necessary?

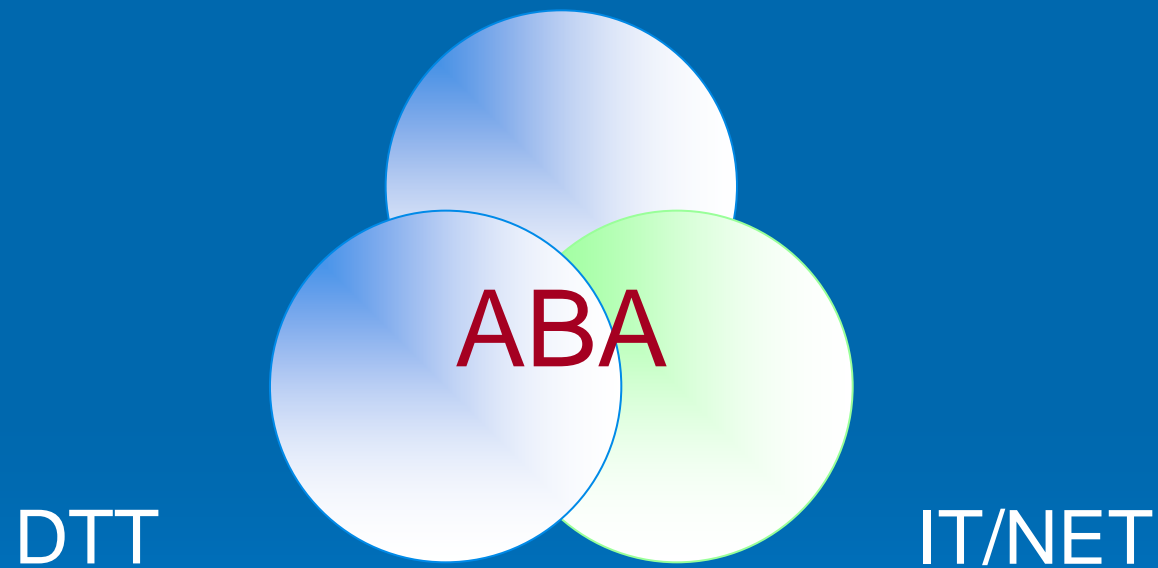
- Using one rigidly may not lead to an individualised approach
- Not using one may lead to teaching skills “out of sync”

# Applications:

- The application of a curriculum should be tailored to an individual child
- Each skill within a domain should form the basis for the subsequent this skill, this way maintenance exercises will become superfluous.
- Within a home programme, this should be delivered in a variety of contexts, using an *eclectic* yet behaviourally based approach

# Delivery of curriculum

Generalisation



# Developing a curriculum:

## ➤ Macro level:

- Skill maps
- Differentiate between component and composite skill
- Use developmental literature

## ➤ Micro level:

- Identify learning objective
- Identify behavioural class/developmental domain
- Set mastery criterion for whole skill
- Set mastery criterion for individual targets
- Differentiate application context
- Describe procedure and schedule of SR+
- Establish prompt hierarchy
- Describe generalisation procedure

# Programme maps

- A task analysis on a larger scale
- Identifying pre-requisites will allow skills to emerge without requiring specific teaching
- Example: [number sequences.doc](#)
- Group Exercise: Descriptions

# Develop a Programme Map

- Identify final skill
- Identify component skills
- Draw Programme Map
- Early Curriculum flowchart

# Writing a programme

Example 1: advanced learner

(composite skill) - Brainstorming:

Example 2: Early learner – Tacting

(component skill)

Group Exercise: Choose a skill and write a programme for teaching it

# Generalisation and Mastery criteria

- Child is able to display the skill in contexts other than the teaching one.
- Child is able to acquire novel responses within that skill without requiring specific additional teaching
- Supervisor and Senior Supervisor/Consultant agreement.

# Data collection

Procedure for each child is designed

Record when items are introduced and achieved

Take a cold probe on each target item at start


Teach item(s)

Record last teaching stage

Mastery of item:  
three correct probes on consecutive sessions

# Data sheets:

## LOGBOOK DATA SHEETS.xls

- Probe sheets
  - Skill sheets
  - Item lists
- 

# Good ABA Procedures for effective DTT

- Pairing the teaching environment with reinforcement
- Ensuring child's motivation
- Allowing mands
- Stimulus demand fading
- Errorless Learning
- 2 seconds prompt delay on transfer trials
- Interspersing acquisition and mastered tasks
- Short ITI (fast paced instructions)
- Mixing and varying trials
- Immediate generalisation
- Working on fluency as well as accuracy
- Immediate generalisation

REINFORCEMENT VARIABLES	TEACHING METHOD	EXAMPLES	TEACHING METHOD	EXAMPLES	
VALUE	USE COMPETING REINFORCERS (MOTIVATION)	Strong Reinforcers to compete with interfering behaviours?	EXTINCTION OF OFF-TASK RESPONSES	Is extinction the right procedure to use? Did it work?	
RATE	REDUCE LEARNER ERRORS	What teaching procedures can reduce errors and frustration?	IMMEDIATE DELIVERY OF REINFORCEMENT	Did you deliver the reinforcement within 2 seconds?	
IMMEDIACY	INTERSPERSE EASY AND HARD TASKS	How many new/hard tasks are there compared to mastered/easy tasks?	USE SHORT INTER-TRIAL INTERVAL (ITI)	Keep pace up between the end of one trial and the beginning of the next.	
MAGNITUDE	FADE IN # OF DEMANDS	How frequent is SR+? Does it need to be more frequent?	TEACH TO FLUENCY	Was his response as quick as it should have been? Could I help him make it faster?	
LEARNER EFFORT?	FADE IN DIFFICULTY OF RESPONSES	Did I start with tasks that were too hard?	MIX AND VARY	Did I vary the type of instructions from instruction to instruction?	
AUTO REINFORCING BEHAVIOUR		<b>TARGET BEHAVIOUR</b>	TASK AVOIDANT BEHAVIOUR		

Thank you all for  
coming!

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