

Is direct therapy effective for secondary-aged students with language impairments?

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Overview

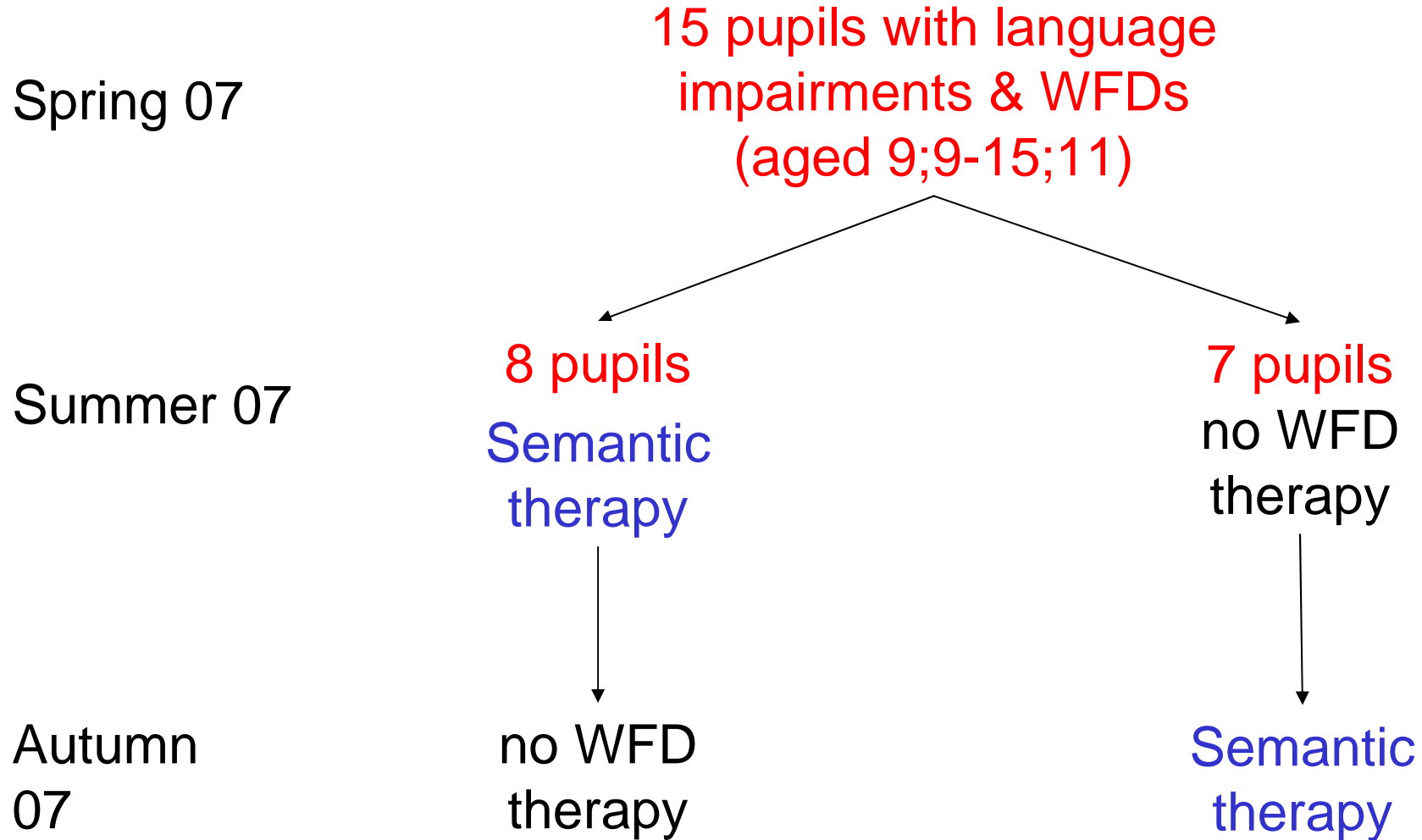
- Semantic therapy for word finding difficulties – RCT
- Verb semantic therapy and ‘Shape Coding’ therapy for verb argument structure – RCT
- ‘Shape Coding’ therapy for grammatical difficulties:
 - Passives and ‘wh’ questions – single subject multiple baseline design
 - Comprehension of datives and ‘wh’ comparative questions – single subject multiple baseline design
 - Use of past tense in writing – group study (pre- vs. post-therapy)

Word finding difficulties

Ebbels, Clark, Eachus, Gallagher, Horniman,
Jennings, McEvoy, Nicoll, Nimmo & Turner. (in prep).

Randomised Control Trial

WFD study design



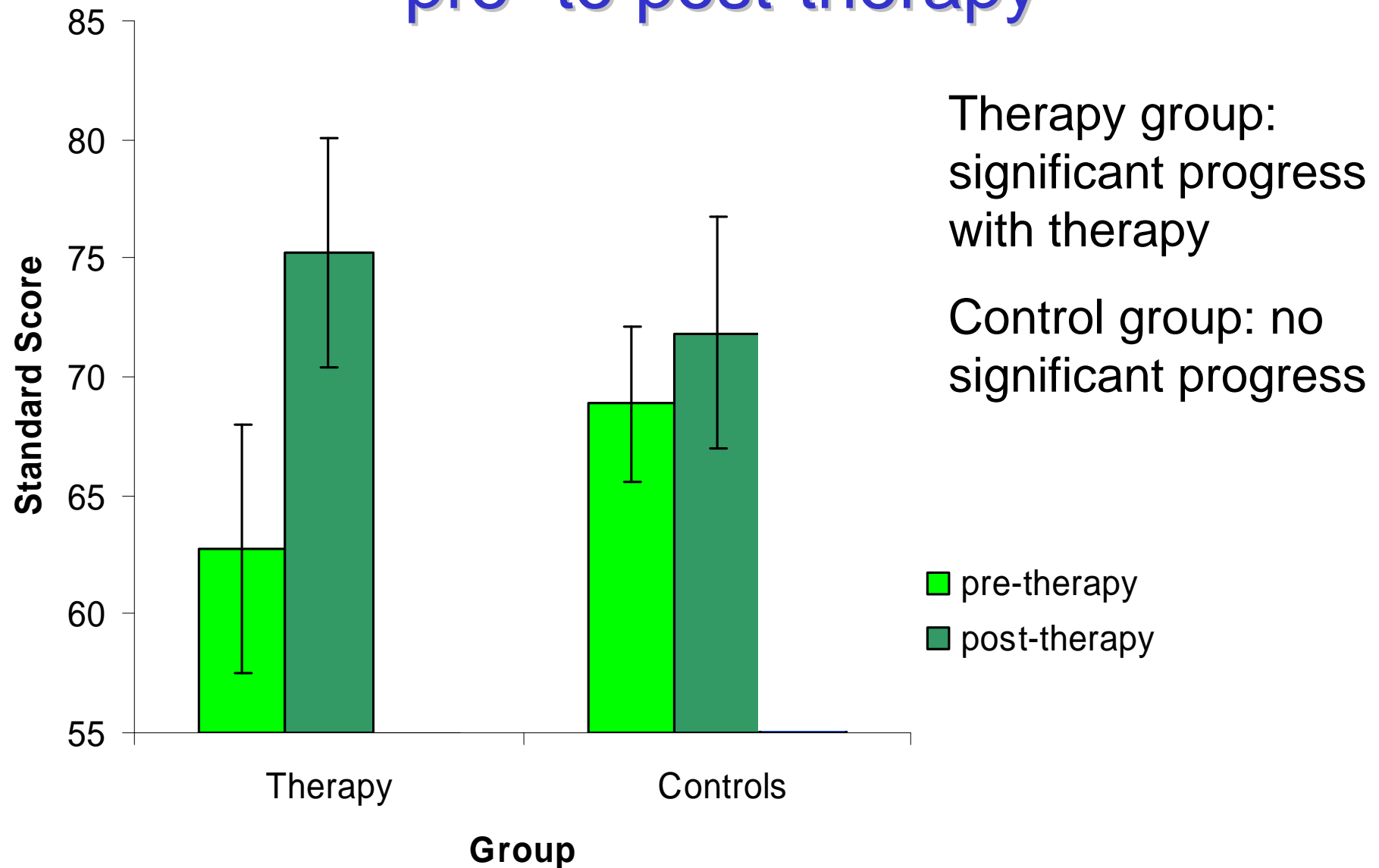
Therapy

- 2 x 15 mins per week for 8 weeks
- 1:1
- Pupils taught using photo cards of one particular category (animals, clothes, food)

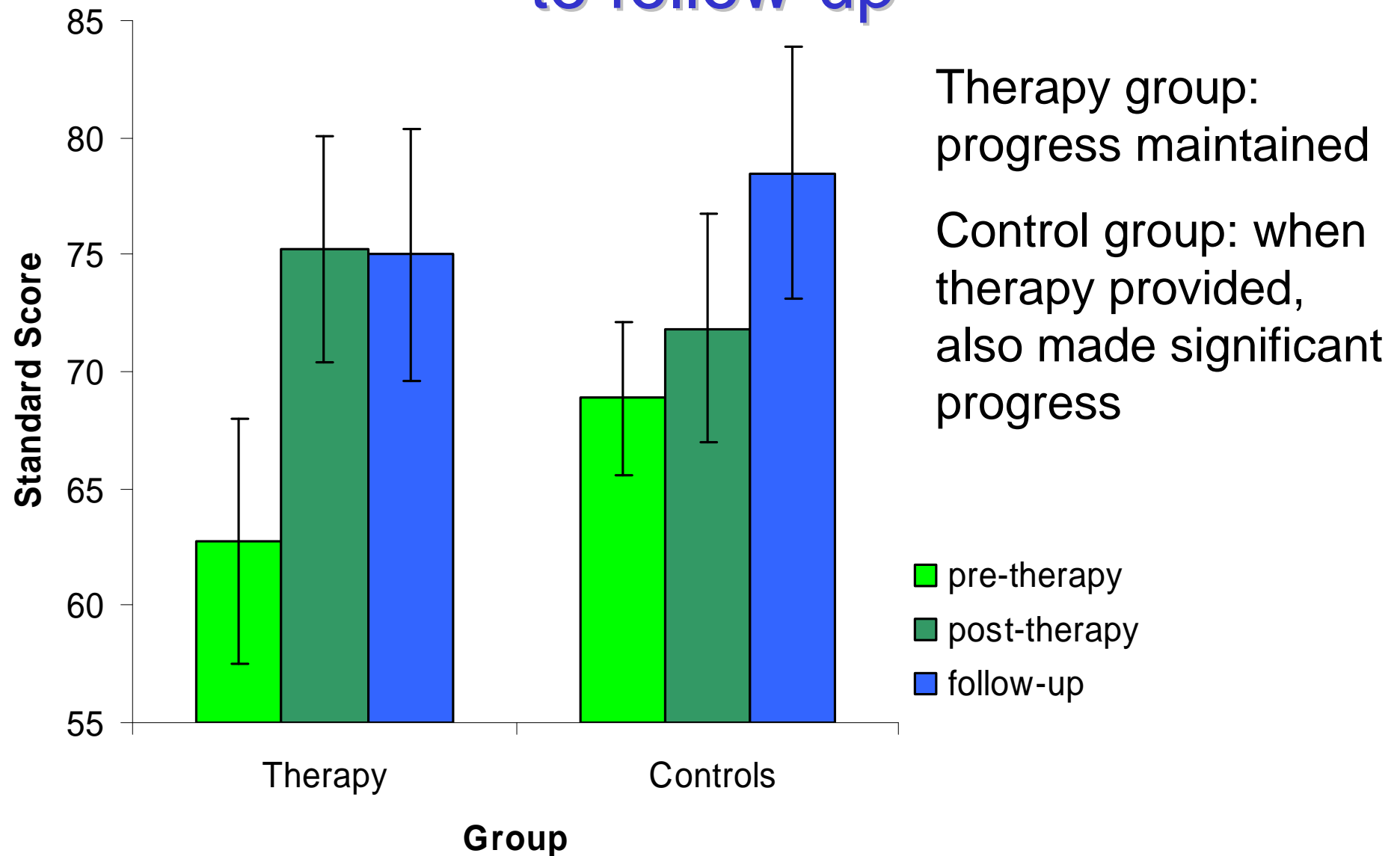
Semantic therapy

- Sort words by semantic categories (broad, then narrower)
- Discuss attributes of pictures
 - category
 - What look like?
 - What noise make? / what made from? / how taste?
 - Where live? / who wears it? / where found?
 - What eat? / when worn? / when eaten?
- Compare pictures in terms of above
- 20 questions giving above cues
- Dice game – dice with above cues, throw dice, pick up picture, give the revealed cue for that picture

TAWF (German, 1990) pre- to post-therapy



TAWF (German, 1990) to follow-up



Conclusion

- Semantic therapy significantly improves word finding ability on a standardised test
- On average, pupils increased from standard score of 65 to 76 on TAWF, but only when they received the therapy
- The original therapy group maintained this progress for 5 months

Verb argument structure

Ebbels, van der Lely & Dockrell (2007)

Randomised Control Trial

What is verb argument structure?

Interface between verb semantics and syntax

Particular verbs can only be used with particular syntactic constructions

What does verb argument structure involve?

1. Use of correct number of arguments

✓

The lady washed the apple
The lady put the apple in the bowl

X

The lady put the apple

2. Correct linking of participants to syntactic positions

The girl poured juice into the glass
The girl filled the glass with juice

The girl filled juice into the glass
The girl poured the glass with juice

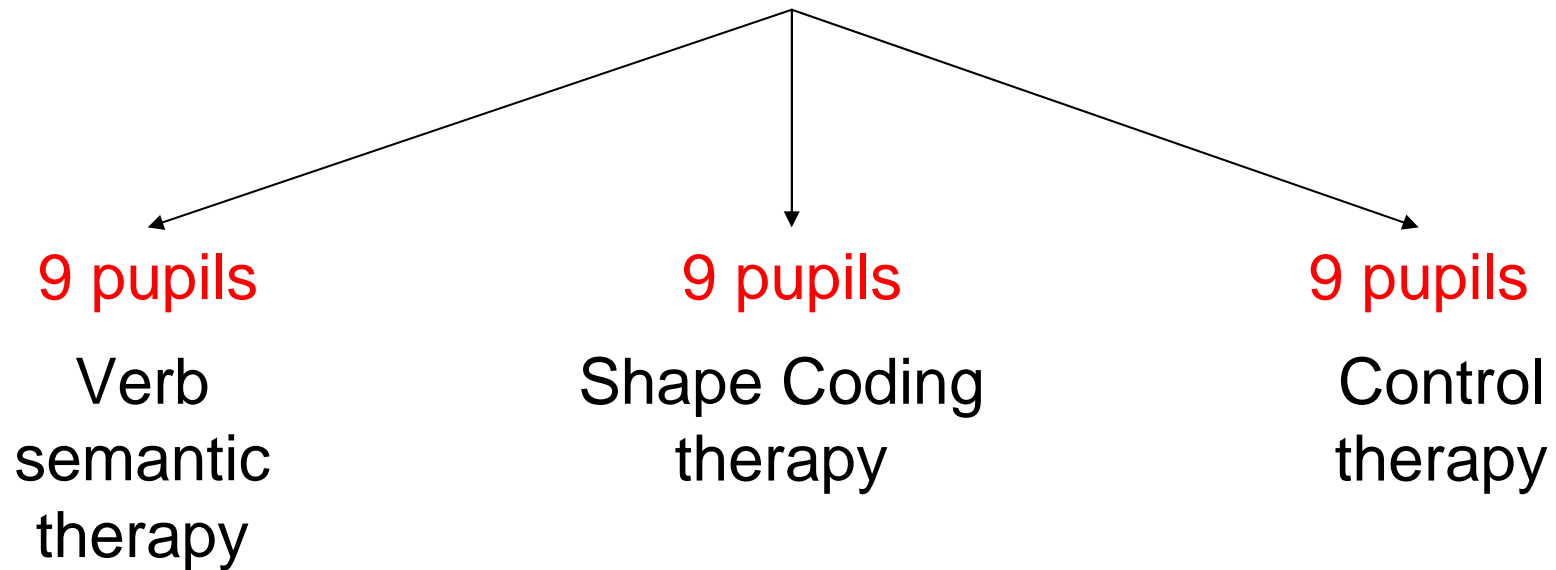
3. Ability to use verb alternations correctly

The man wiped his face
The man wiped the sweat off

The man wiped the sweat
The man wiped his face off

Design

27 pupils with language impairments
(aged 11;0-16;1)



Therapy

- 1 x 30 minutes per week for 9 weeks
- 1:1
- Normal therapy and classroom teaching continued, although verb argument structure not targeted

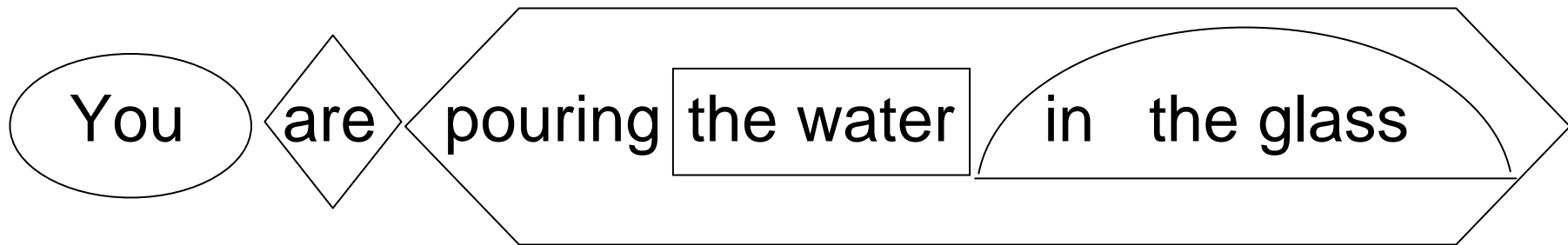
Verb semantic therapy

- SLT and child jointly devise a definition of verb with as much detail as possible
- e.g.,

<p>“fill”</p> <ul style="list-style-type: none">➤ make something full to the top➤ put something in it	<p>“pour”</p> <ul style="list-style-type: none">➤ liquid or lots of things➤ go down together➤ to a new place➤ container is tipping
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- SLT / child act out event and the other decides if event fits all the criteria (i.e., can be described by verb or not)

Shape Coding therapy

- Teach verbs in groups according to their broad meaning
- Teach matching constructions/argument structures using Shape Coding templates
- E.g:



Results

- Children who received control therapy did not improve (even tended to get worse)
- Both target therapies significantly improved verb argument structure scores...
-for both taught verbs and control verbs
- Progress maintained 3-4 months after therapy completed

Any differences between methods?

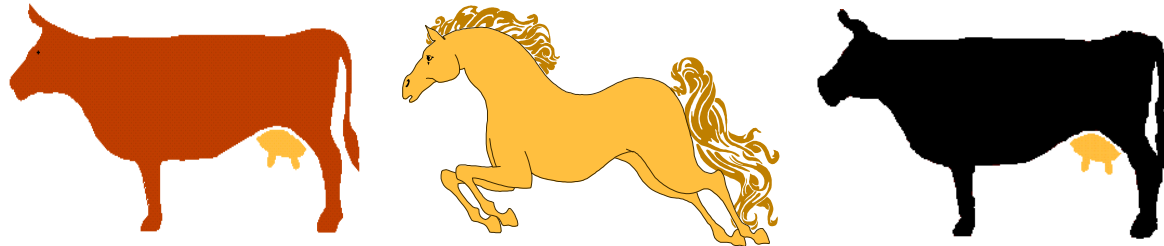
- Both Verb semantic and Shape Coding therapy equally effective at reducing errors such as:
 - She's pouring the glass with water
 - He's filling the water into the glass
- Shape Coding therapy better at increasing use of optional and obligatory arguments
 - He's leaning the broom (against the table)
 - He's hanging the 'T' shirt (on the washing line)

Production and comprehension of 'wh' questions and passives

Ebbels & van der Lely (2001)

4 pupils in single subject multiple
baseline design

“Wh” questions



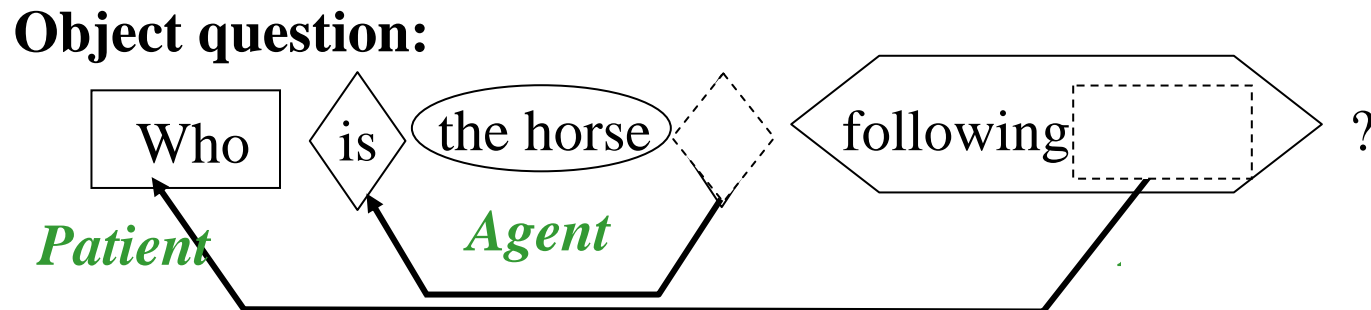
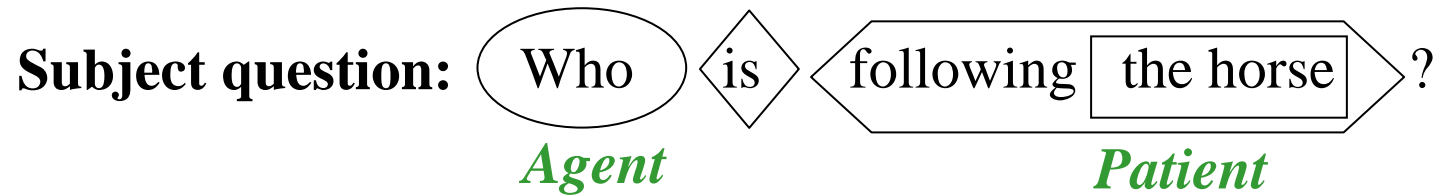
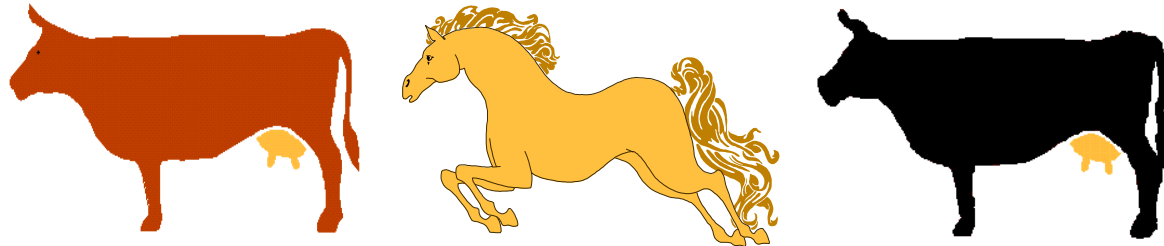
Subject question: Who is following the horse ?

Agent *Patient*

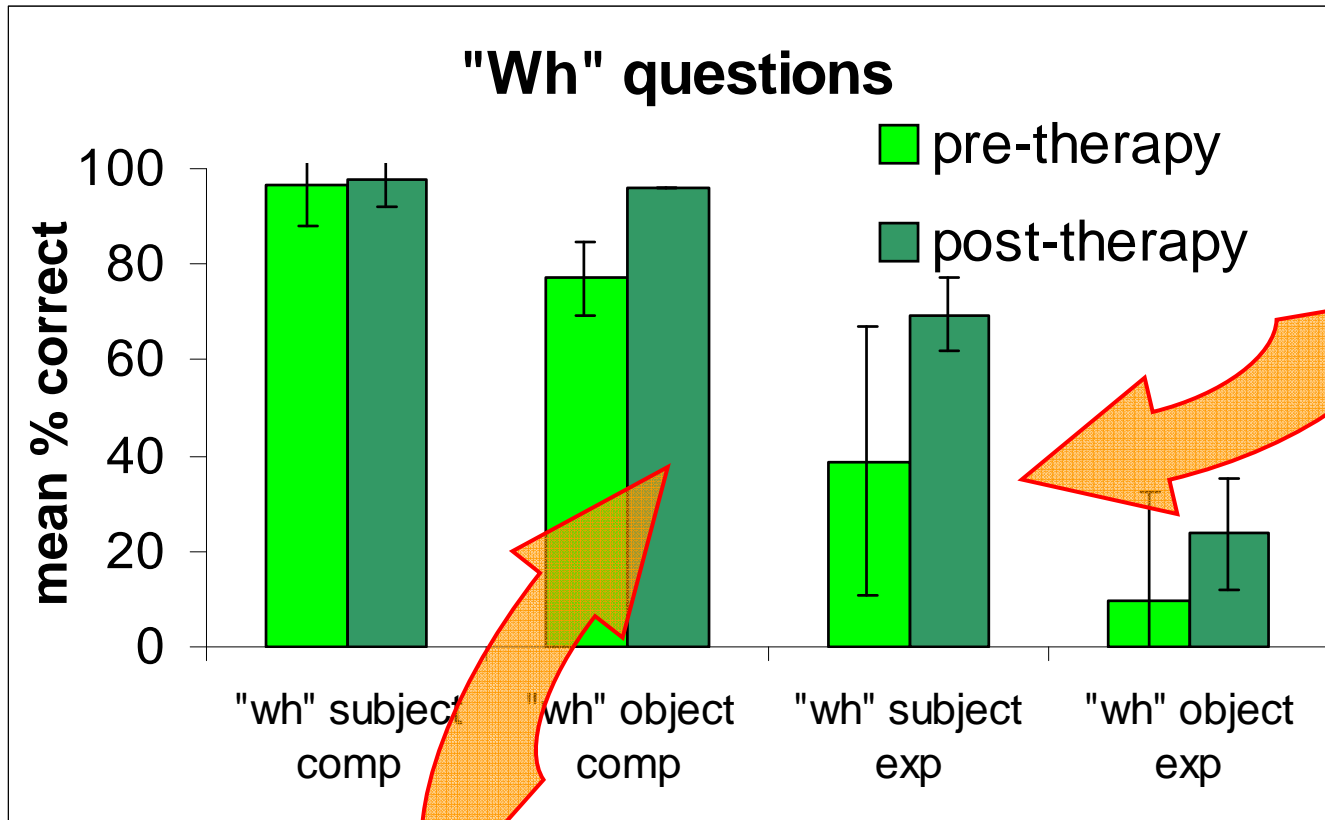
Object question:

Who is the horse following ?

“Wh” questions



"Wh" questions



4/4 made significant progress with production, maintained at significant level 10 weeks later by 1/4

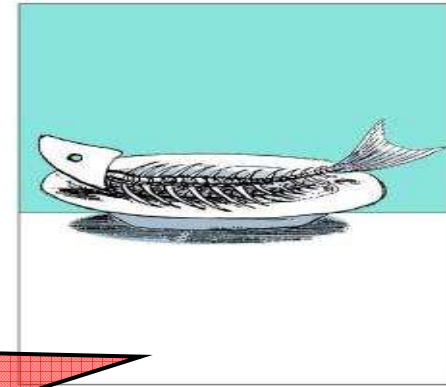
2/4 initially had difficulties with 'wh' object question comprehension – both made and maintained significant progress

Test of Active and Passive Sentences

 Target

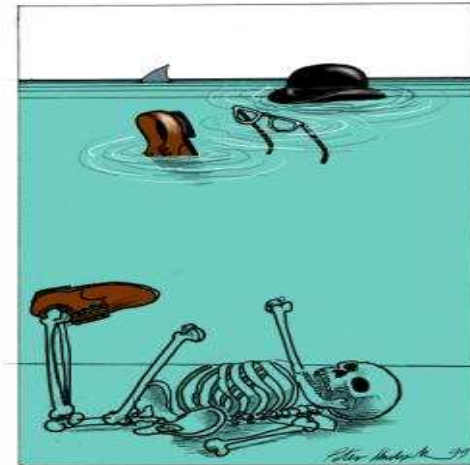
 Most common error

The man eats the fish 



The fish is being eaten 

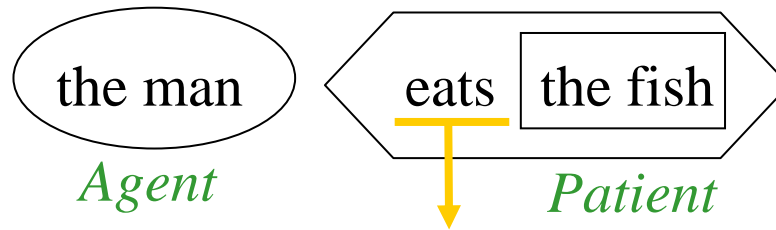

The fish is eaten by the man 



van der Lely (1996)

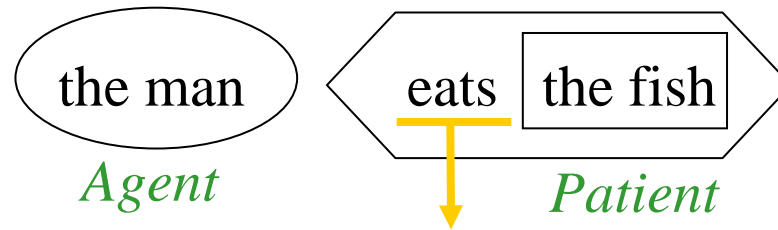
Active to passive

Active:

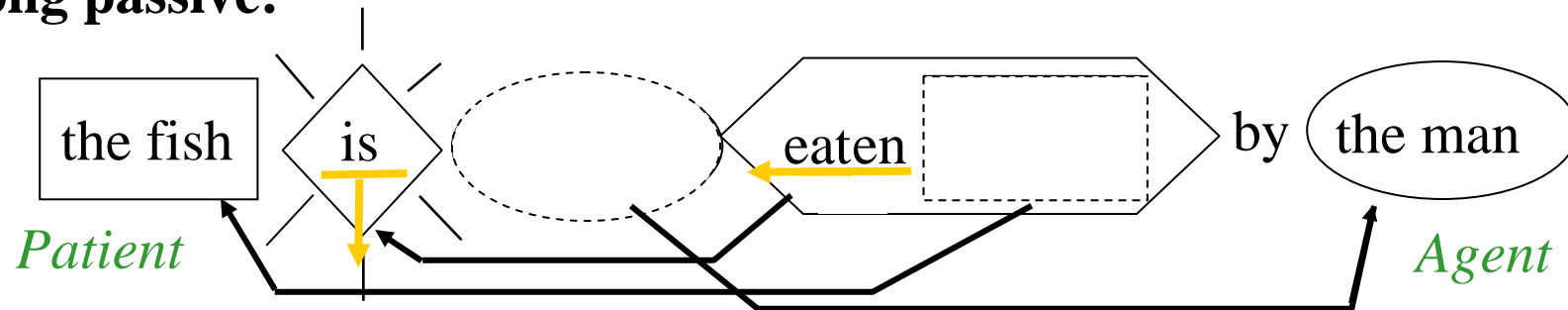


Active to passive

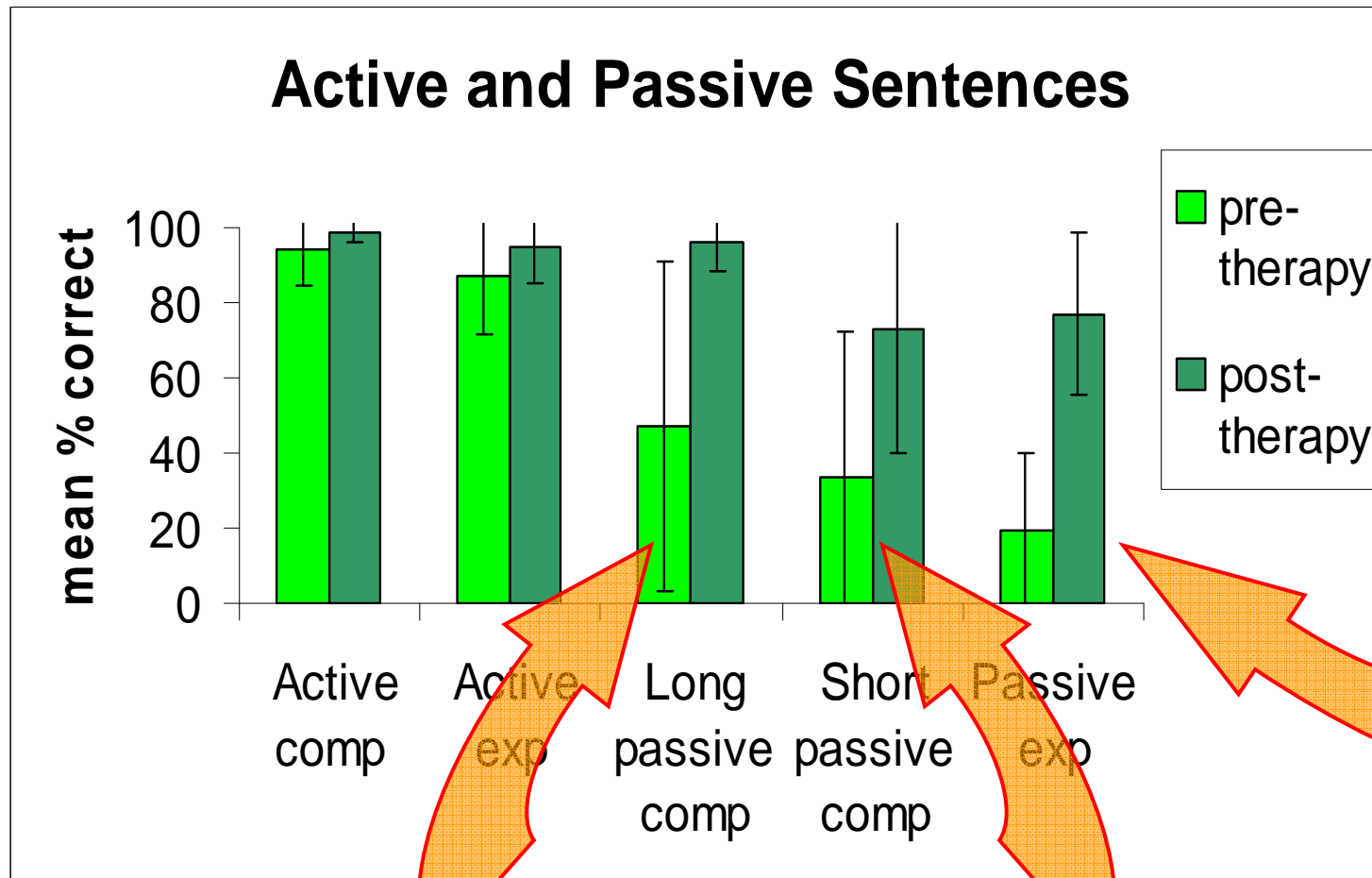
Active:



Long passive:



Actives and passives



4/4 had difficulties producing passives – 3/4 made and maintained significant progress

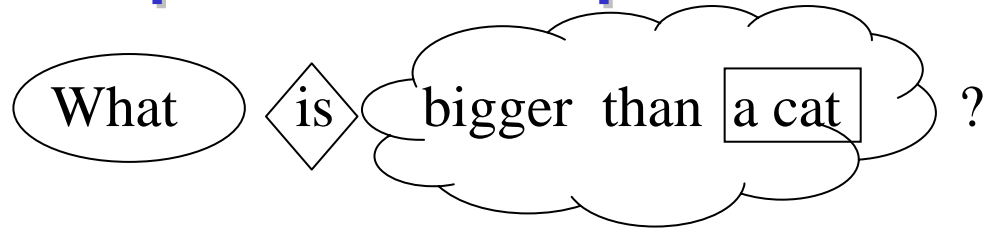
3/4 had difficulties comprehending passives – all made and maintained significant progress

Comprehension of datives & 'wh' comparative questions

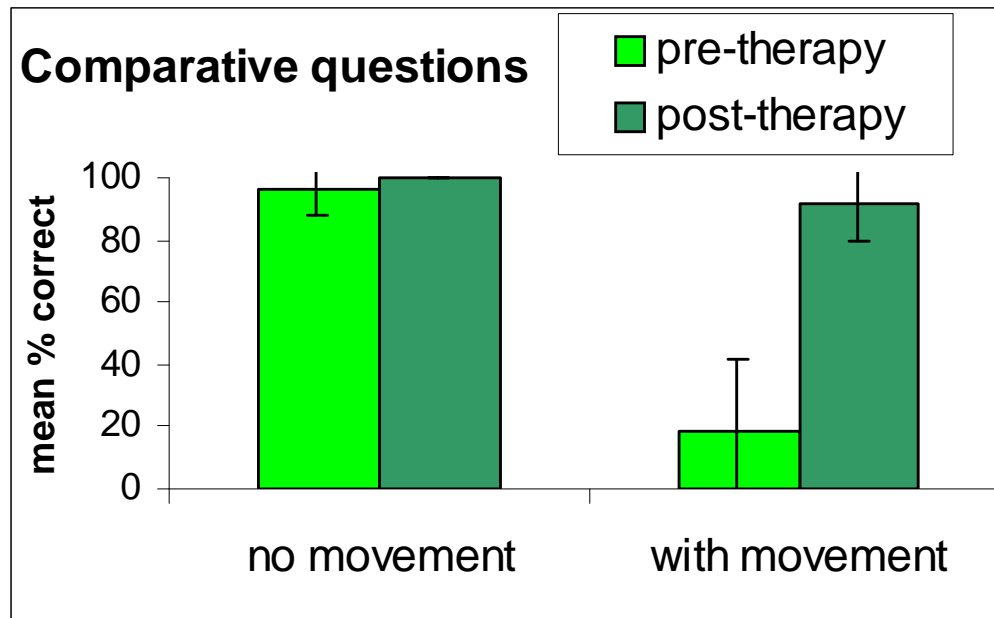
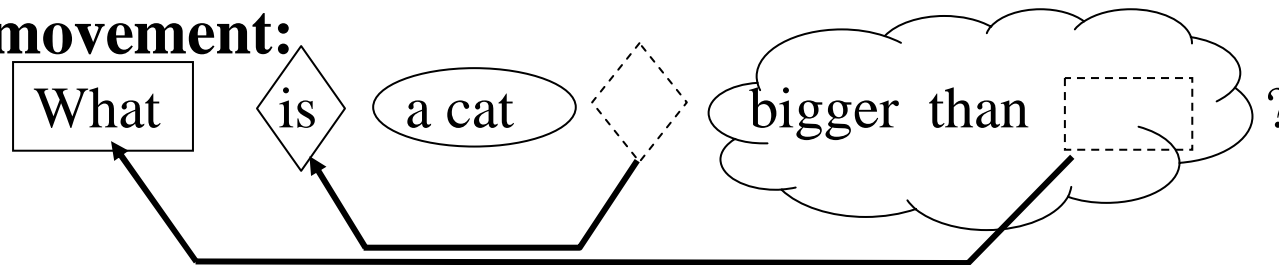
Ebbels (2007)

“Wh” comparative questions

No movement:



With movement:

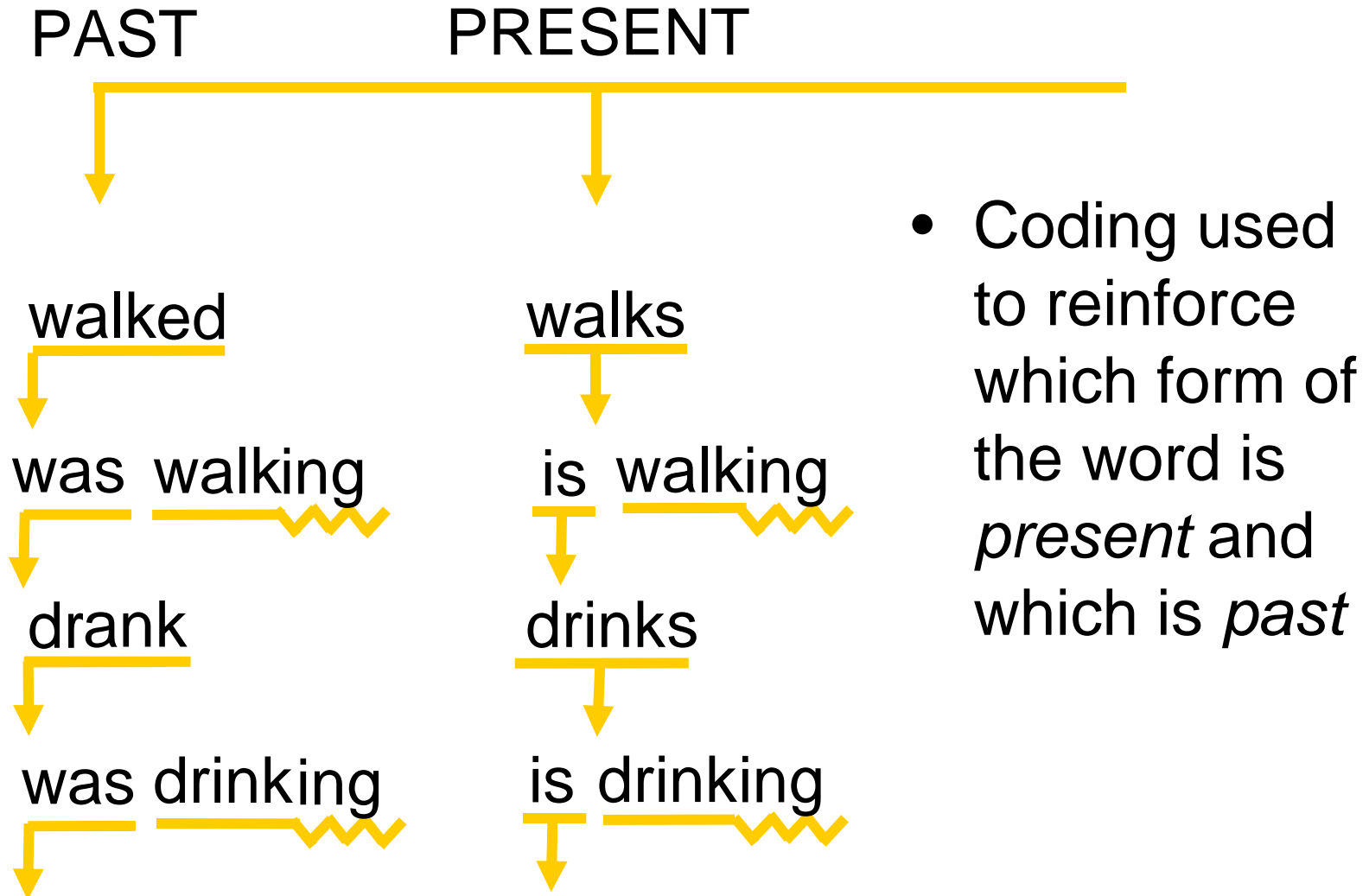


2/2 made significant progress on questions involving movement

Past tense morphology

Ebbels (2007)

Verb tenses

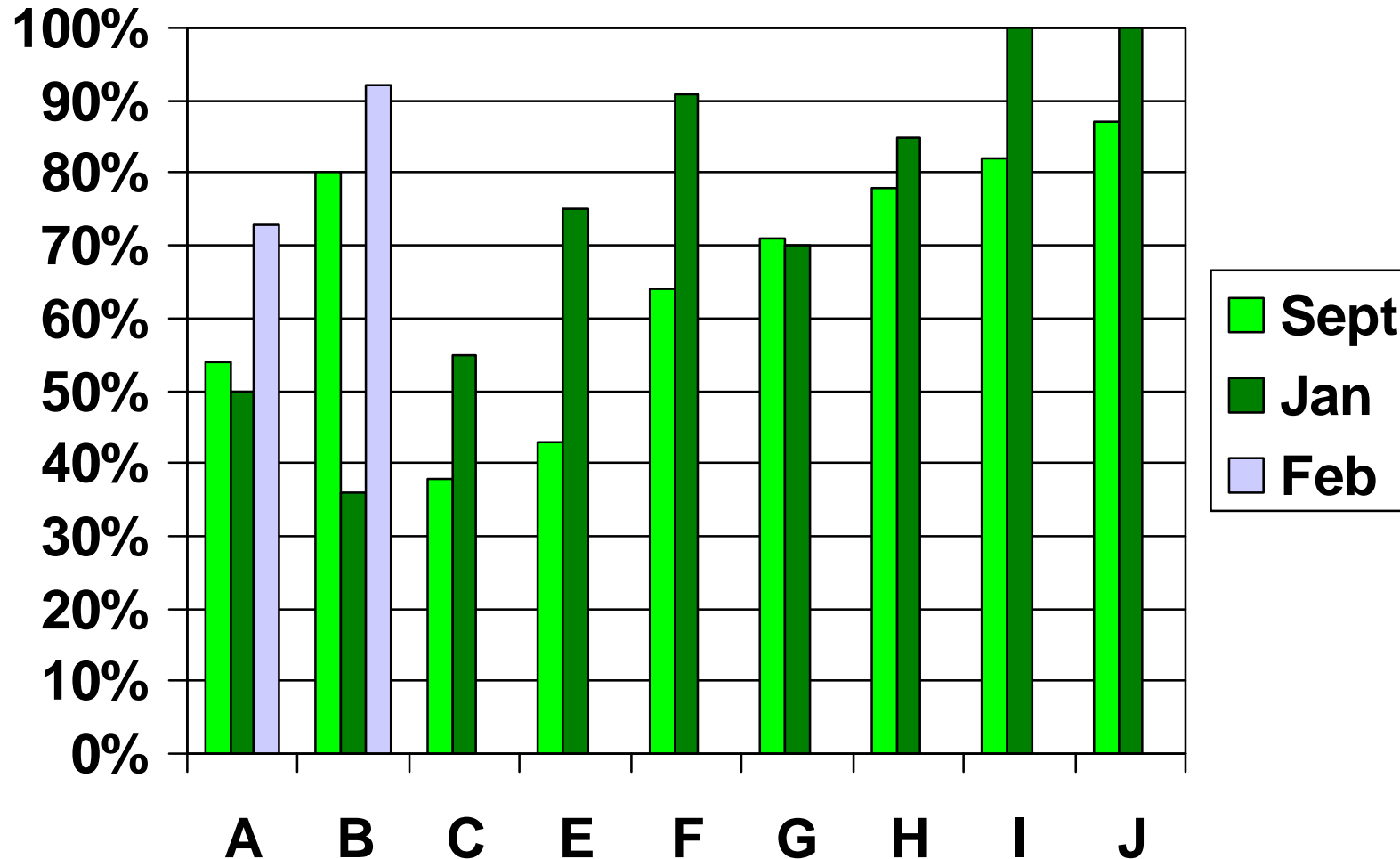


Teaching past tense to class (weekly English lesson)

- Start with time line
- Establish position of 'present' and 'past'
- List verbs in present progressive versus past progressive
- Introduce simple past tense
- Class identify tense of different verbs in isolation or in sentences
- Class change words/sentences from present to past tense and vice versa
- Class correct adult's 'bad' sentences
- Class correct own free writing

Unaided free writing

Percentage of verbs used in past tense when required



Overall conclusions

- Direct SLT for secondary aged, language impaired pupils can be effective for improving:
 - Word finding difficulties
 - Production of verb argument structure
 - Comprehension of 'wh' questions and passives
 - Comprehension of datives
 - Use of past tense in written work

Next project!!

- Compare two methods of improving text comprehension
- Autumn term: pre-therapy testing (by SLT students)
- Spring term: therapy for 2/3 of pupils in study (followed by post-therapy testing)
- Summer term: therapy for remaining 1/3 (followed by testing)
- Next Aut: re-test on standardised listening and reading comprehension tests