

# Vocabulary and Reading in Secondary School (VaRiSS)

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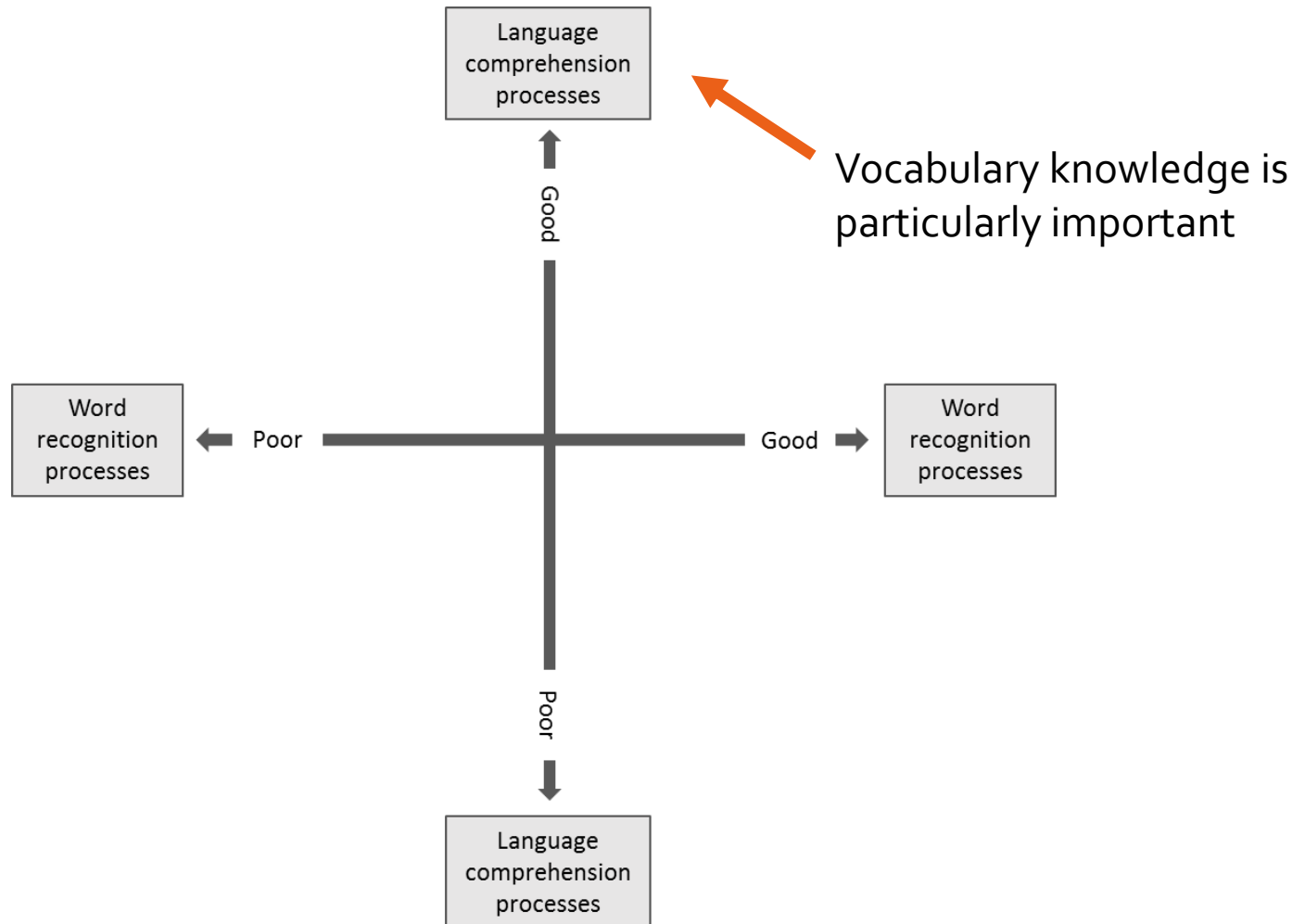


ROYAL  
HOLLOWAY  
UNIVERSITY  
OF LONDON

- Adequate oral vocabulary knowledge and reading is crucial for accessing the curriculum
- Expectations of independence: focus on 'reading to learn'
- Poor oral vocabulary knowledge and reading will be a barrier to exam performance
- Focus here is on oral vocabulary knowledge and reading, though other aspects of language and literacy (e.g., grammar, spelling, writing) are also important
- Little is known about oral vocabulary and reading progress in secondary school → VaRiSS project

# Simple View of Reading

Reading comprehension = word recognition x language comprehension



# Reciprocal relations between vocabulary and reading



- Role of vocabulary in reading comprehension and word-level reading

- Large longitudinal study



Focus for today: Diversity

- Role of reading in vocabulary development:
  1. Reading → new lexical representations, specification of existing lexical representations
  2. Orthographic support for vocabulary learning

# Longitudinal study: Design and participants

2013-2014

2014-2015

2015-2016

## Phase 1

12.01 yrs (.33)

$N = 208$

48.6% girls

## Phase 2

13.07 yrs (.34)

$N = 195$

49.7% girls

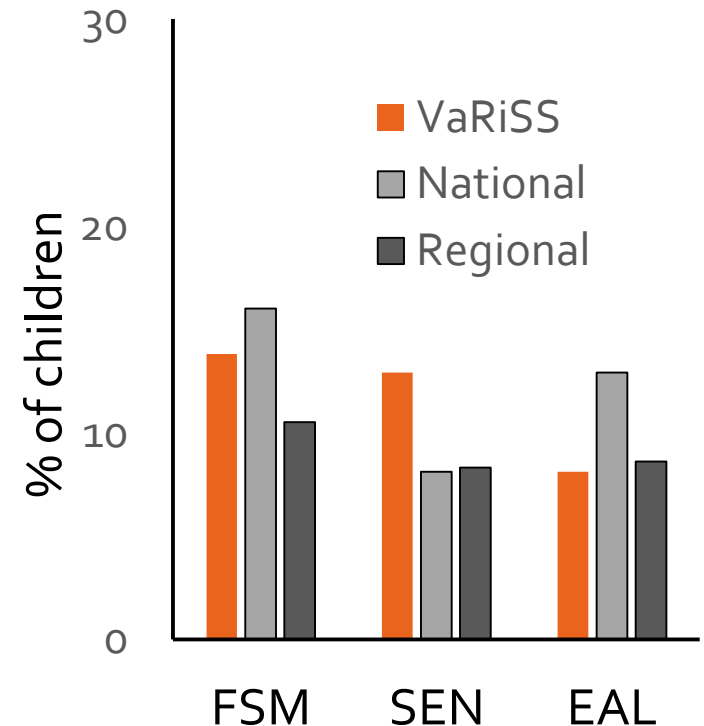
## Phase 3

14.01 yrs (.33)

$N = 186$

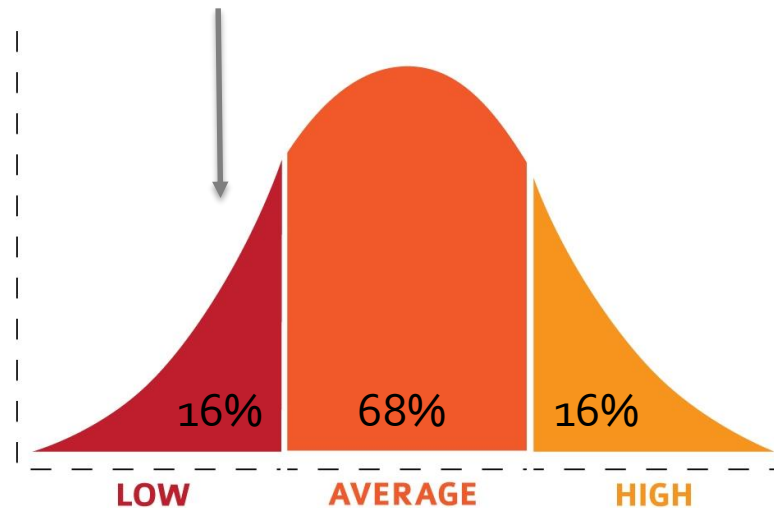
48.4% girls

unselected



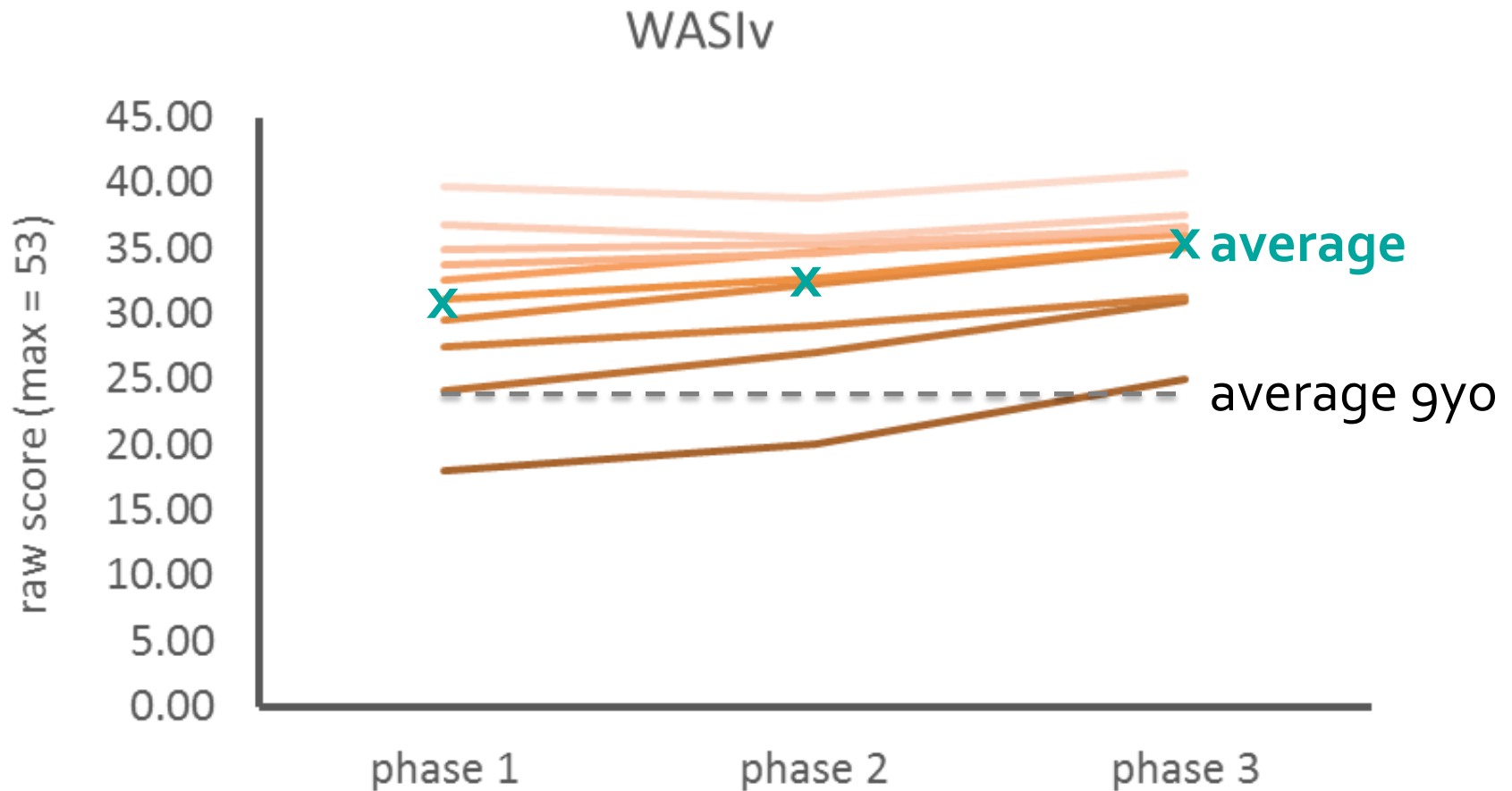
- 6 hours with each pupil (2 hours per year)
- Nonverbal reasoning
- Oral vocabulary (two measures)
  - Receptive, expressive, depth and breadth
  - Also, semantic relationships between words (where possible)
- Word-level reading (six measures)
  - Nonwords, regular words, irregular words, accuracy, efficiency
- Reading comprehension (one measure)
  - Minimum four passages (individual differences, reliability)

- Standardised assessments (administration, norm-referenced)



- More than one measure of each construct (reliability)

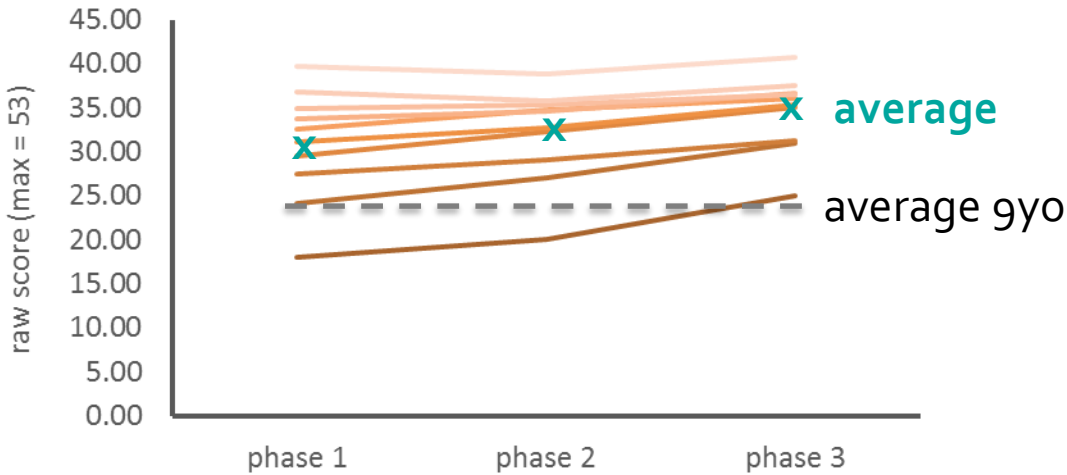
# Oral vocabulary





# Oral vocabulary

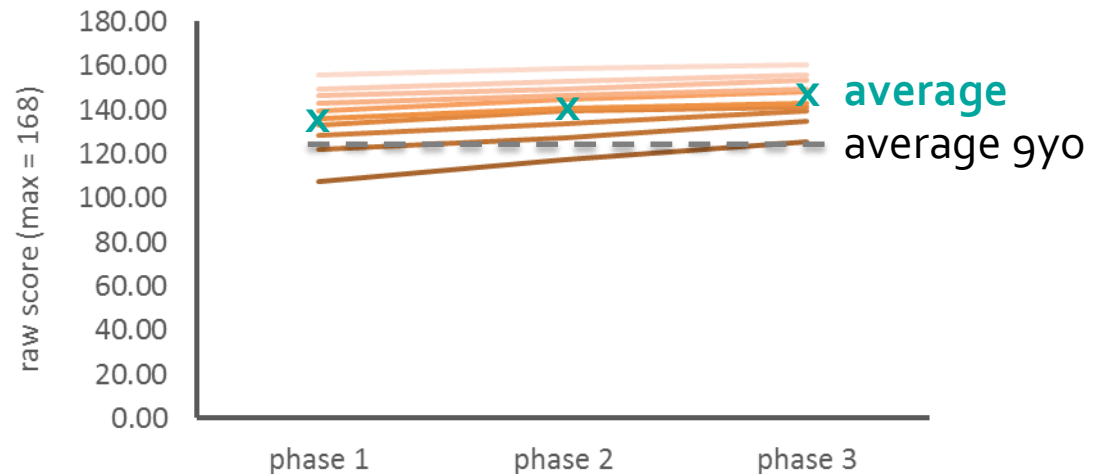
WASiv



minimal growth  
large individual differences  
parallel lines

means on all measures  
commensurate with test  
norms

BPVS



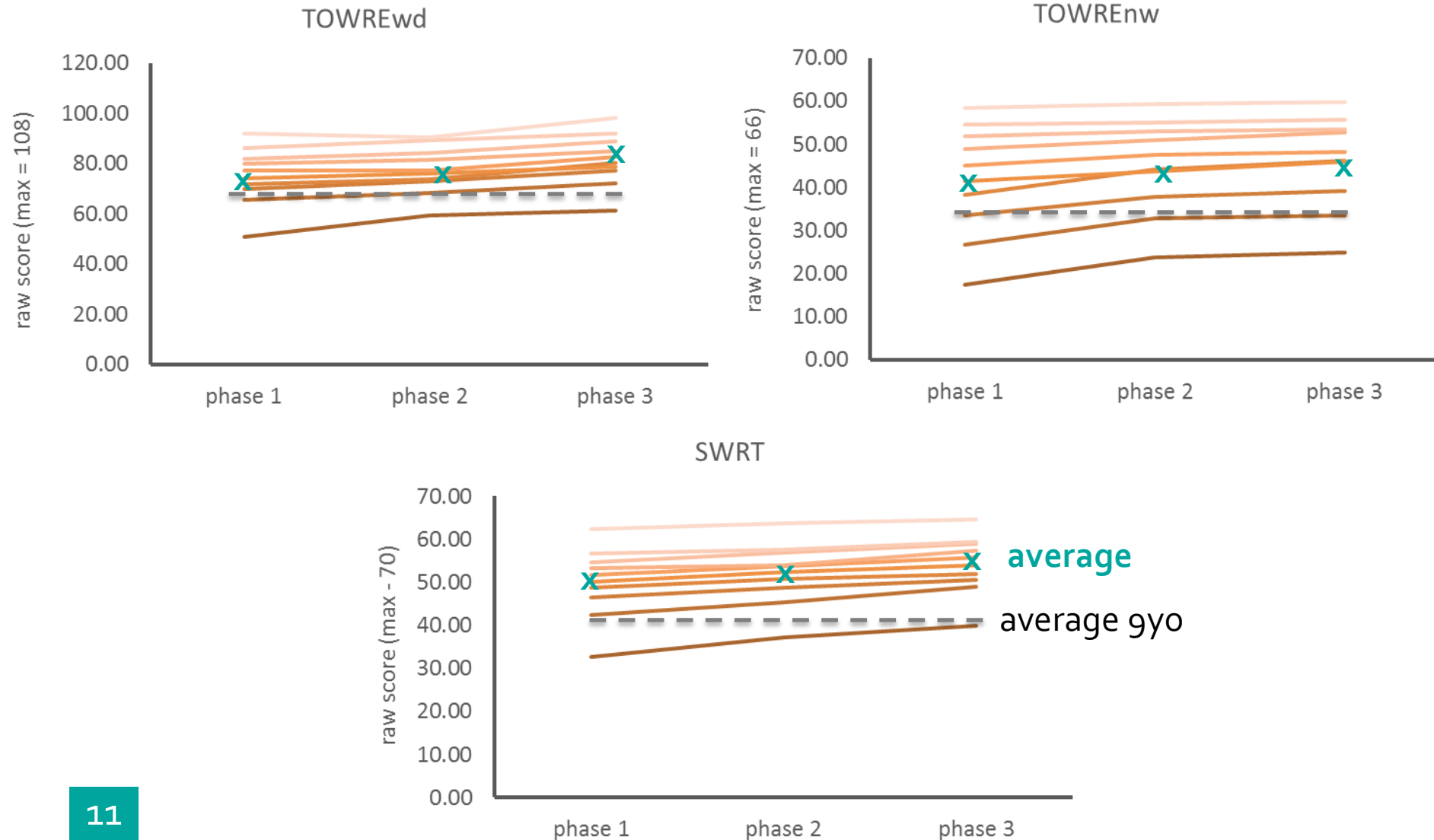
## ■ Comprehension

- Likely didn't know: canine, polluting, illumination, rodent, foundation, interior, embracing, ascending

## ■ Production

- Likely didn't know: decade, tradition, enthusiastic, improvise, haste

# Word reading



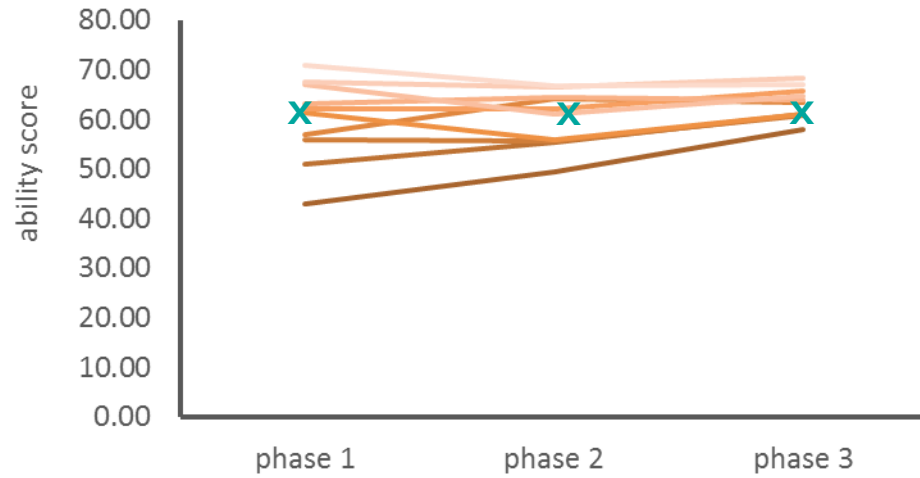
# Word reading difficulties

In 45 seconds

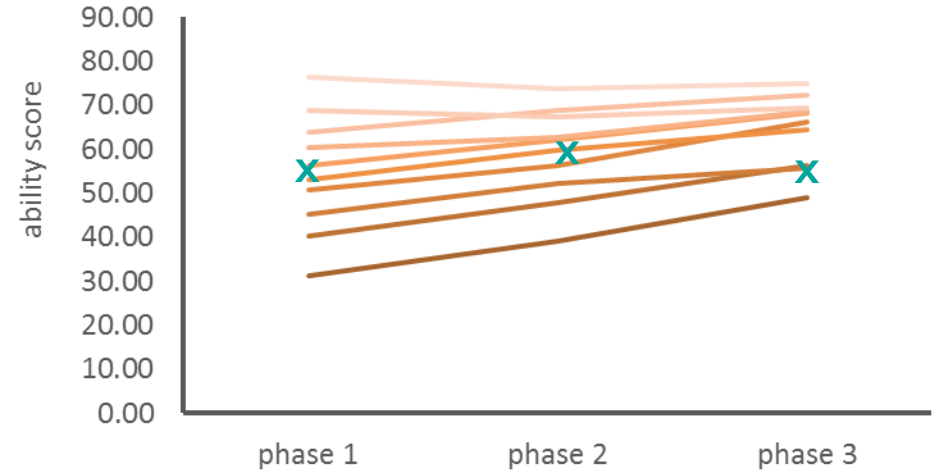
is	<u>jump</u>	inside
up	part	plane
cat	fast	pretty
red	fine	famous
me	milk	children
to	back	without
no	lost	finally
we	find	strange
he	paper	budget
the	open	repress
and	kind	<u>contain</u>
yes	able	justice
of	shoes	morning
him	money	resolve
as	great	describe
book	father	garment
was	river	business
help	space	qualify
then	short	potent
time	left	collapse
wood	people	elements
let	almost	pioneer
men	waves	remember
baby	child	dangerous
new	strong	uniform
stop	crowd	necessary
work	better	problems

# Reading comprehension

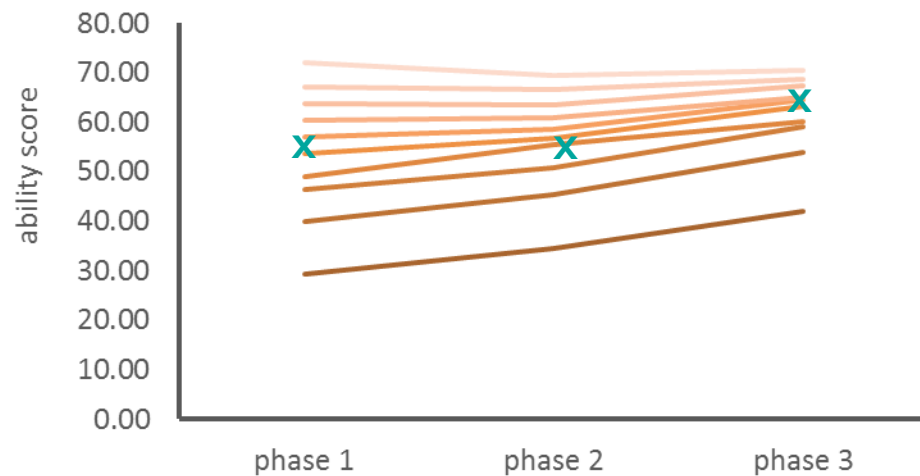
### YARCsupp1



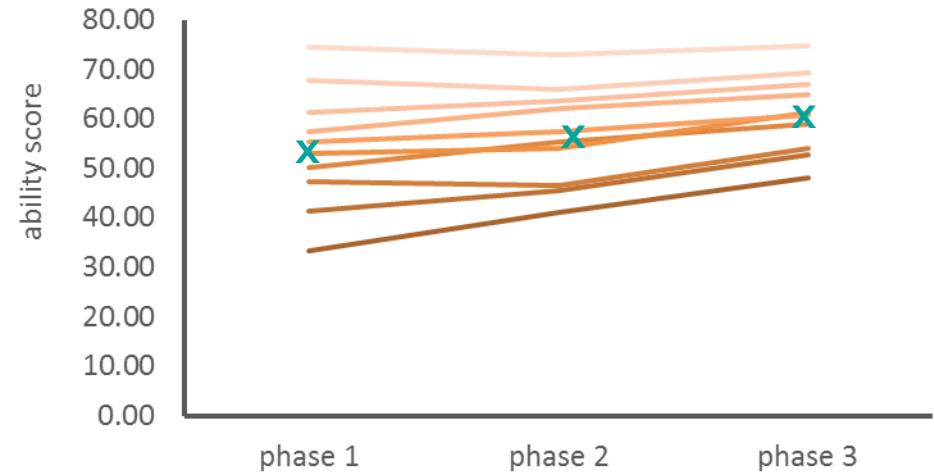
### YARC1.1



### YARC1.2



### YARC2.2



## Supplementary 1: Missing Handbag

It was the first day of Ryan's family holiday. They were staying in a cottage which overlooked the harbour in Peele Bay. It was a glorious sunny day, so the family had wandered down to the beach. Dad volunteered to look after their bags. Mum explored the beach, then joined Ryan and his sister in the foaming waves. Dad relaxed and read his magazine. When mum had had enough of the water, she returned to sit with dad. He had fallen asleep and was scarlet. She glanced around and realised her handbag was missing. It must have been stolen. Mum was furious with dad.

Everyone hurried to the police station. Much to their surprise it had already been handed in and nothing was missing. The policeman said an old lady had found it in the beach toilets. Then mum remembered; she had left it there. Mum apologised to dad and bought him a huge ice-cream.

Questions (literal, simple inferences):

- Who played in the sea? Literal
- Why did the family decide to go to the beach? Knowledge-based inference

aimed at 7-8 year olds (Year 3)

# Accessing the Year 7 curriculum

Emilia Thorne was standing by the school window and she observed him, saying nothing.

Will carried on until he was well out of sight of the cottages and when he had found a reasonably smooth stretch of road he swung his leg over the saddle and sat still for a moment. He placed the toe of his boot on one of the pedals. Gritting his teeth and taking a deep breath, he pushed it down and wobbled forward. The bicycle curved and swooped into a near-by hedge. He picked himself up and climbed back on to the seat. Again the bicycle skidded over to one side so that he grazed his knees on the rough road. Undaunted, he clambered back on again and each time he swerved and fell, he only grew more determined.

In spite of the hoar frost that covered the hedgerows and surrounding fields, learning to ride was hot work and soon his overcoat was left dangling from the branch of a near-by tree.

*Goodnight Mister Tom, Michelle Magorian*

## Artificial satellites

The Moon is the Earth's natural satellite. The first artificial satellite, Sputnik 1, was launched on October 4 1957 by the Russians. In the 50 years since then, there have been over 5000 satellites launched into space. There are still 850 in orbit.

At least 500 of the satellites in orbit are used for communications. Worldwide telephone calls, internet signals and television programmes are beamed up to the satellites from one part of the world. The signals are amplified and then beamed down to receivers in other parts of the world.

These satellites take 24 hours to orbit and the Earth spins on its axis every 24 hours. This means that the satellite sending a signal to your house appears to be in the same place in the sky. After all, you don't want to have to keep moving your satellite dish.

*Science Works 1, Gordon-Hulme et al.*

- Large individual differences: diversity
- Poorest performing 10-20%:
  - not exceeding levels of the average 9 year old (12 – 14 years)
  - not catching up with their peers
  - increased risk for FSM, SEN
  - many not FSM or SEN i.e. not attracting additional support or resources
- Minimal growth
  - but commensurate with test norms



- The gap between the poorest and highest achievers is not closing in the early secondary years
- Vocabulary and reading difficulties – barrier to accessing the curriculum
- There is progress in vocabulary and foundational reading skills from but this is limited
  - clearly learning a lot of new information (e.g. subject-specific vocab)
- Limited input, materials, teacher knowledge:
  - Vocabulary and reading instruction needed (universal, targeted)
  - Initial teacher education, continuing professional development
  - Materials...

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- VaRiSS project: [www.variss.org](http://www.variss.org); @varissproject; [www.facebook.co.uk/varissproject](http://www.facebook.co.uk/varissproject)

