



Nottingham Trent
University

Psychology

The UK Journey of delivering PALS for 2. to 6th grade and how systematic vocabulary was added

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Overview of Talk

1. PALS-UK Story
2. Education Endowment Foundation 2024
3. Starling Programme



PALS-UK



PALS-UK (Grade 2-6 Version)

Programme Delivery Model

- 20-week whole-class, fully manualized
 - Structured **paired reading**
 - Differentiation through text choice
 - Pupils take turns as coach and reader
 - 3 sessions x 35 minutes per week
- Activities scaffold comprehension
 - Partner reading – modelled and practice oral reading, correction, re-reading
 - Retell
 - Paragraph shrinking
 - Prediction relay



PALS Model



Basic Idea



Test



Revise



Test



Story of PALS-UK



PALS in the UK

- Teacher request - evidence-based program to support reading fluency
- Paired reading/peer tutoring is common but how effective is it?
- Initial feasibility trial and adaptations (2014-2019)
 - Anglicisation, modernization
 - Further pre-delivery training
 - Adapted motivational framework (less extrinsic more intrinsic)
- Preliminary trial 2019 – 2020 interrupted by COVID-19
- Further refinements to support delivery
 - Further updated manual
 - Online and video resources
 - Teacher logs for record keeping
 - Vocabulary monitoring
 - Supporting book choice

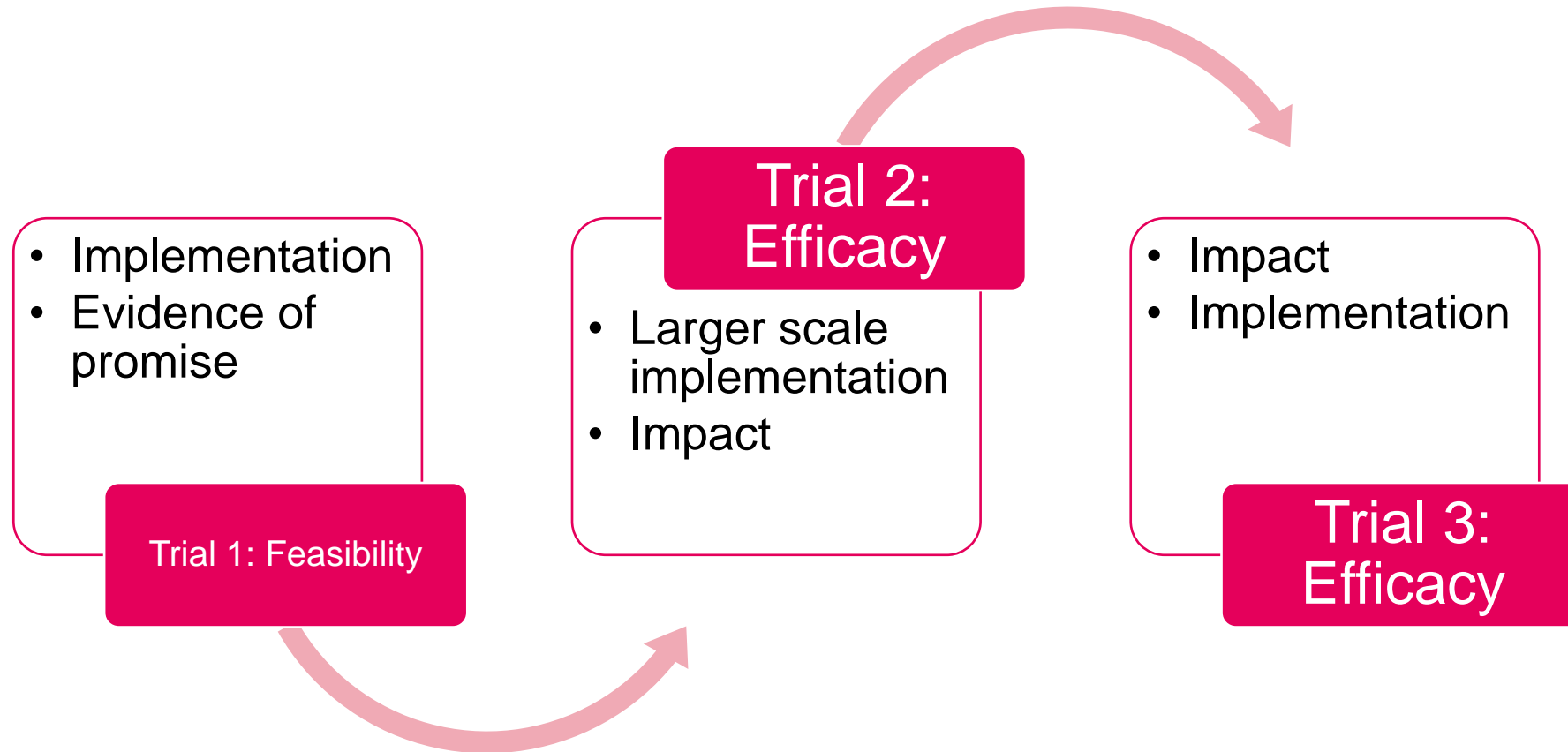


Vardy, E. J., Al Otaiba, S., Breadmore, H. L., Kung, S. H., Pétursdóttir, A. L., Zaru, M. W., & McMaster, K. L. (2022). Teacher–researcher partnership in the translation and implementing of PALS (Peer-Assisted Learning Strategies): An international perspective. *Journal of Research in Reading, 45*(3), 517-526. <https://doi.org/10.1111/1467-9817.12404>

Why should PALS-UK raise attainment?

- Oral reading fluency
 - Practice oral reading, immediate individualised feedback, modelling and re-reading and text exposure.
- Comprehension
 - Scaffold and practice use of strategies identifying main who/want, sequencing, summarising and predicting.
 - Retell, paragraph shrinking and prediction relay.
- Reading self-efficacy and attitudes
 - Supportive structured peer support, differentiation and motivation book choice and informal book talk.

PALS-UK Trials



Pilot Work

Pilot questions

- **Whether** it can be implemented with fidelity in English schools?
- **What** adaptations would make implementation more feasible and acceptable?
- Any evidence of promise?

Research methods

- Controlled trial
- 9 schools (301 pupils)
 - 5 intervention schools (8 teachers) delivering PALS Grade 2-6 in Year 5
- Implementation and process
 - Field notes, teacher logs
 - All teachers interviewed at end
- Pre-/post-test outcomes

Pupil Feedback

'You can be better at reading aloud.'
(School D)

'I was on stage 12, but since PALS I am on stage 16.' (School C)

'We got to read lots and lots of books.' (School A)

Reading

'Before PALS I hated reading out aloud, but now I don't care.'
(School D)

'I think it helps because you got to answer lots of questions, which helps you with your reading.' (School E)

Working with others

'It is helping us working with other people.' (School E)

Modifications to create PALS-UK

- Motivate using existing rewards, interest, peers
- Books
- Anglicisation and modernisation of manual and resources
- Focus on implementation



Education Endowment Foundation Project

First Trial



EEF First Trial

Research questions

- **Whether** it PALS-UK works for most children?
- **How** and **why** does it work?
- **What** makes it work well?
 - Updated manual and resources
 - Enhanced training and support
 - Changes to motivational framework
 - Books to enable implementation
- **Who** does it work for (teachers and pupils)?

Research methods

- Clustered randomised control trial, independent evaluation
- 89 schools
 - 2520 Year 5 pupils
- >90 teachers began delivering PALS-UK in their class from Autumn 2019

COVID

Impact on implementation

- 18-20th week, schools closed to most pupils (March 23rd 2020).
- Most pupils did not return until September 2020.
- Activities are incompatible with infection control procedures

Impact on evaluation of implementation

- Delayed
- Low and uneven response to post-delivery surveys and interviews
 - e.g., 7/44 control headteachers completed post-test surveys

Implementation evaluation

- Perfect compliance for
 - Teacher training (attendance logs)
 - Pupil training (survey data)
 - 16 weeks delivery with high fidelity (survey and observation logs)
- Barriers and facilitators – ideas for further development to support implementation

Modifications

- Manual and resources
- Training
 - How and Why
 - Decision making
- Ongoing support
 - Online resources



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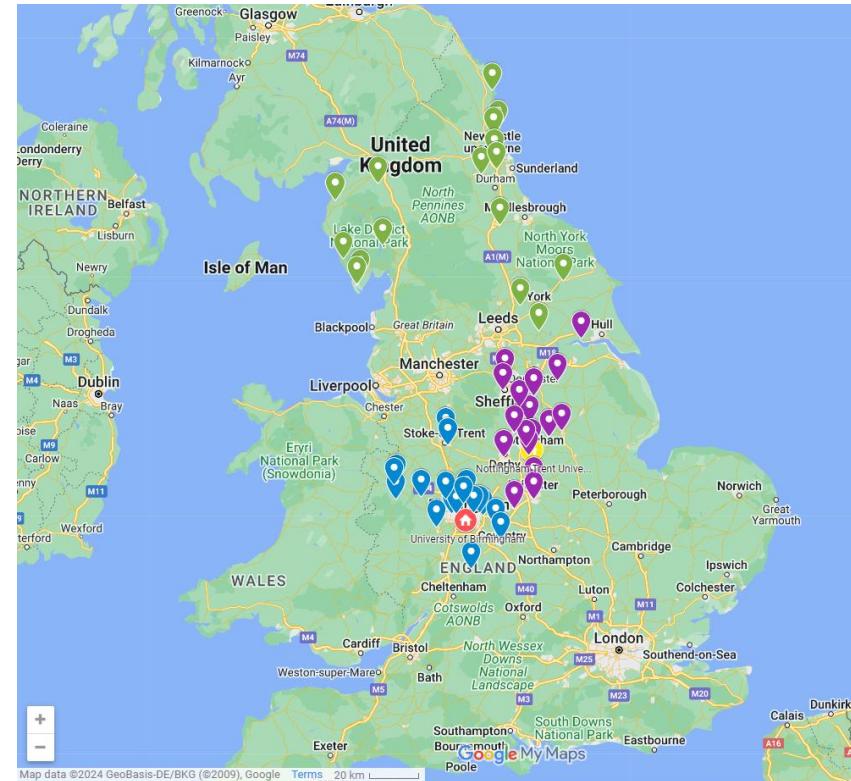
Second Trial



EEF Second Trial

Research methods

- Clustered randomised control trial, independent evaluation
- 103 schools in evaluation
 - 53 intervention/50 business-as-usual control
 - 4840 Year 5 pupils in England



Data Collected

- Impact
 - Reading attainment (PiRA - curriculum linked assessment)
 - Reading self-efficacy and attitudes (Vardy et al., in prep)
 - Reading comprehension, fluency (WIAT, MDFS)
 - Subgroup analysis (FSM, SEND, ability)
- Implementation and process
 - Observations – training and implementation
 - Teacher logs
 - Teacher and headteacher surveys and interviews
 - Pupil focus groups
- Cost



Pupil outcomes: Research Questions

1. What impact does PALS-UK have on reading attainment?
2. What impact does PALS-UK have on reading skills and feelings about reading?
 - (a) oral reading fluency and (b) reading comprehension?
 - (a) reading self-efficacy and (b) motivation for reading?



RQ1: What impact does PALS-UK have on reading attainment?

https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/pals-uk-accelerator-fund

Education Endowment Foundation

Evidence and resources ▾ Networks ▾ Projects ▾ About us ▾

Projects > Projects > PALS-UK - second trial

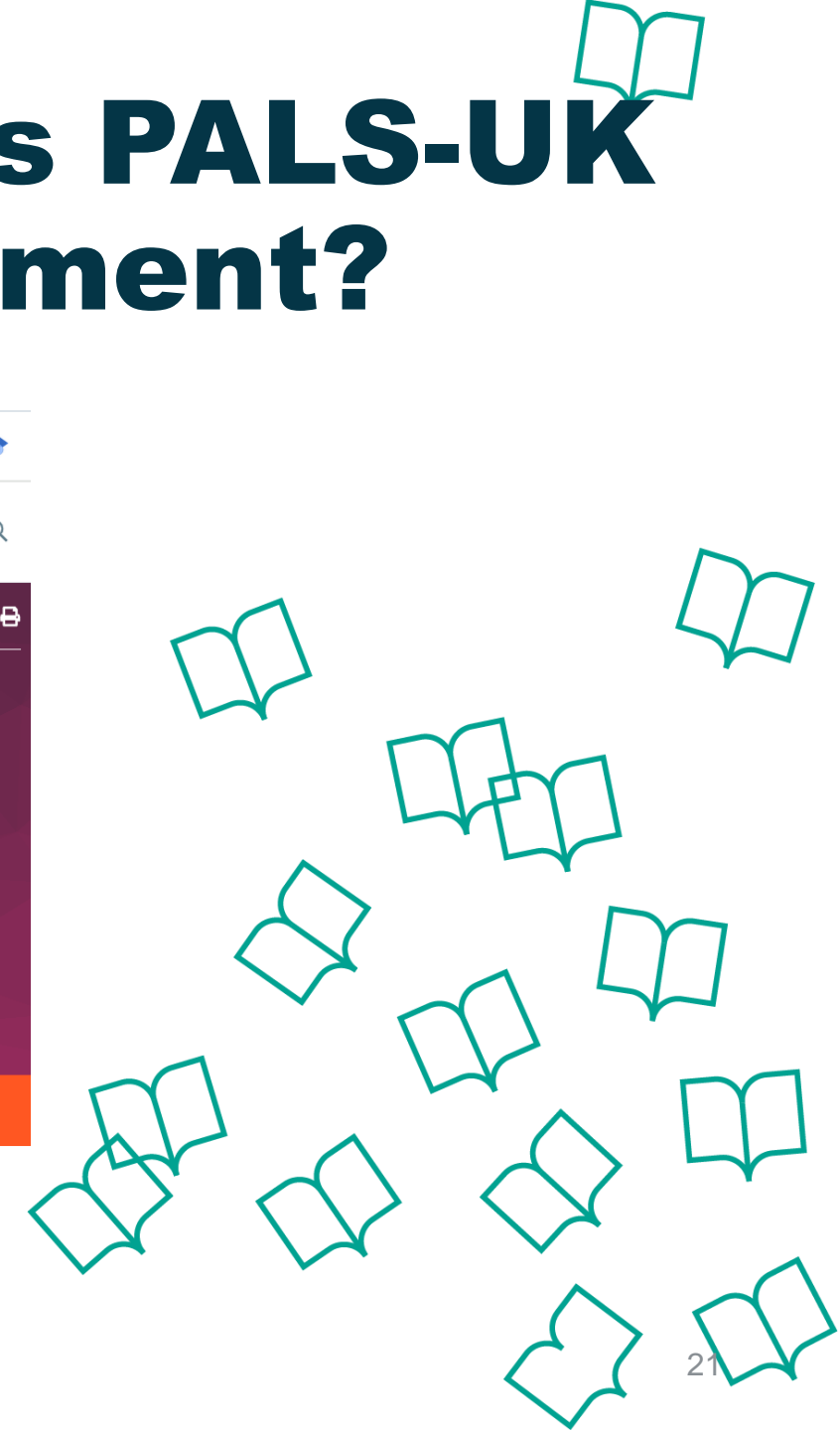
PALS-UK – second trial

Nottingham Trent University

Implementation cost ⓘ Evidence strength ⓘ Impact (months) ⓘ

£ £ £ £ £ 🔒 🔒 🔒 🔒 🔒 **+2** months

[EEF Summary](#) [Were the schools in the trial similar to my ...](#) [Could I implement this in my school?](#) [How much does it cost?](#) [Downloads](#) [📄 Research Results](#)



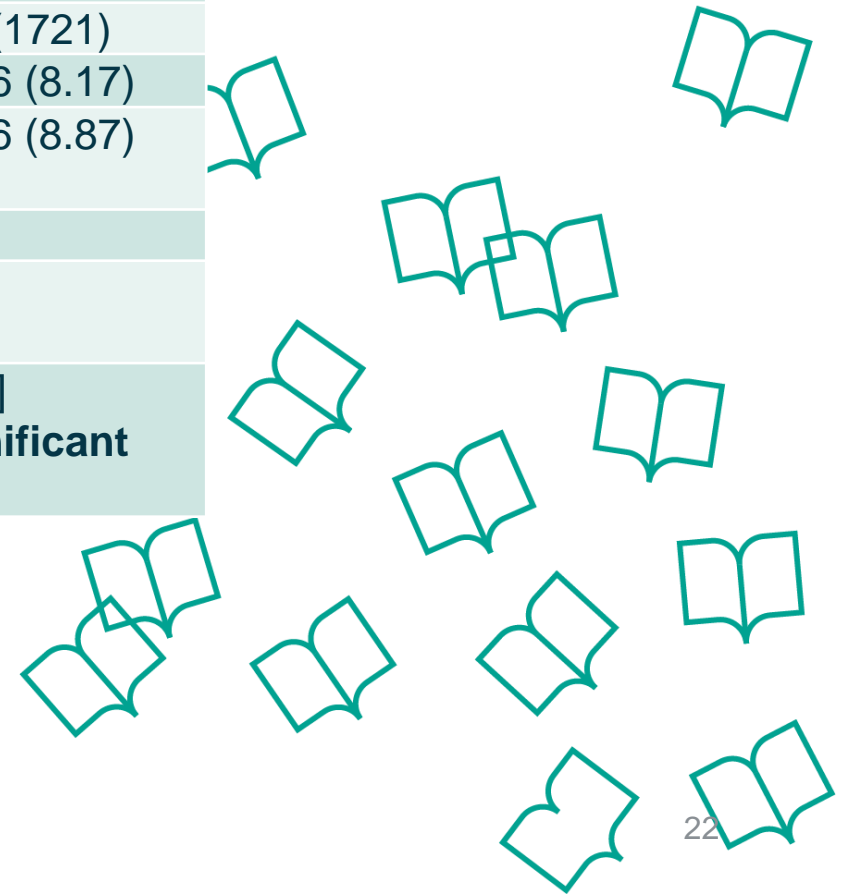
RQ1: What impact does PALS-UK have on reading attainment?



	Attainment (PiRA)	
	PALS-UK	Control
N schools (pupils)	53 (1907)	50 (1721)
Baseline mean raw (standard deviation)	16.13 (8.22)	16.26 (8.17)
Endline mean reading attainment raw (standard deviation)	22.32 (8.26)	21.46 (8.87)
Treatment effect estimate – beta (standard error)	1.025 (0.459)	
Effect size estimate [95% confidence interval]	0.12 [0.014,0.225] Positive, medium, significant (p<.05)	

Multi-level linear regression models

- Treatment group, randomisation strata, month of birth, baseline attainment
- Class and school level random effects
- RML, ITT



RQ2: (a) reading skills?



	Reading comprehension (WIAT-III UK-T)		Reading fluency/rate (WIAT-III UK-T)	Multidimensional fluency (Rasinski)
	PALS-UK	Control		
N schools (pupils)	49 (467)	48 (455)		
Baseline mean raw (standard deviation)	N/A	N/A		
Endline mean raw (standard deviation)	57.46 (8.32)	55.61 (9.61)		
Treatment effect estimate – beta (standard error)	1.468 (0.666)			
Effect size estimate [95% confidence interval]	0.16 [0.018, 0.308] Positive, medium, significant ($p < .05$)			

Multi-level linear regression models

- Treatment group, randomisation strata, month of birth, baseline attainment
- School level random effects
- RML, ITT





RQ2: (b) feelings about reading?

	Self-efficacy		Motivation for reading	
	PALS-UK	Control	PALS-UK	Control
N schools (pupils)	52 (1563)	50 (1462)	56 (1977)	50 (1458)
Baseline mean (standard deviation)	105.51 (23.75)	106.52 (23.16)	53.38 (12.14)	53.28 (12.66)
Endline mean (standard deviation)	105.18 (20.10)	105.13 (19.52)	52.35 (12.86)	51.61 (13.00)
Treatment effect estimate – beta (standard error)	0.354 (1.037)		0.890 (0.623)	
Effect size estimate [95% confidence interval]	0.018 [-0.085, 0.120] Positive, very small, NS		0.069 [-0.026, 0.163] Positive, small, NS	

Multi-level linear regression models

- Treatment group, randomisation strata, month of birth, baseline scores
- Class and school level random effects
- RML, ITT

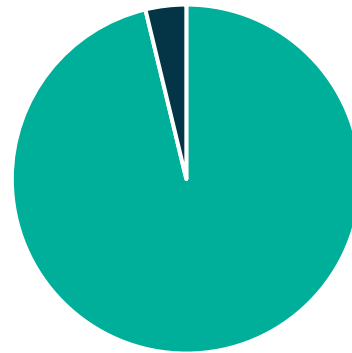


Implementation and Process Evaluation (IPE)

- How was PALS-UK delivered and supported?
 - To what extent did fidelity vary and why?
 - Enablers and barriers
 - Experience
 - Contextual factors
 - Unexpected outcomes
- Initiatives undertaken by the control group.
- Quantitative and qualitative data collected.
 - Six case study schools
 - Surveys
 - Observations
 - Field notes
 - Structured observations
 - Documentation delivery
 - Teacher logs
 - Interviews

Training

- 53 intervention schools – 51 schools attended the initial training.
- 47 schools attended half-day training
- Small number of attendees at the Twilight sessions.
- Initial 1 day in-person training
 - 125 teachers trained
 - 7 regional locations
- Training included
 - Trial overview
 - How and why PALS-UK
 - Practice with facilitator, then in pairs
 - Quizzes to check knowledge
 - Practical implementation guidance and supporting decision making



■ Compliant (51/53) ■ Noncompliant (2/53)

Delivery

- 51 schools completed the pupil training in the four weeks.
 - Evidence from 49 schools on delivering the 20 weeks.
 - High fidelity for delivery
 - School timetable, strike days and staff absence impacted on delivery.
- Pairing
 - Kept it 'fresh'
 - 'Re-focus children'
 - Considered central to success in case study schools.
 - Essential activity and implemented with high fidelity.

Observations

- Four observations completed by the delivery team and peer observers.
 - Delivery team (weeks 1-4/ 10-14)
 - Peer observer (week 5-9/15-20)
- Implementation quality
 - 90% + excellent implementation
 - 80-90% very good
 - 70-80% adequate
 - Less than 70% poor
- Focus on first RA and Peer Observer
- Research assistant visit
 - 41 schools 90%+
 - 5 schools 80-89%
 - 4 schools 70-79%
 - 1 school 0-69%
- Peer observer outcome
 - 37 schools 90%+
 - 3 schools 80-89%
 - 2 schools 70-79%
 - 0 schools 0-69%

Enablers and Barriers

▪ Enablers

- Initial training – well received/research focus that built confidence.
- Manual –very useful. ‘fool proof’
- Selection of books – excellent range
- Peer observations – powerful facilitator
- In-school factor-protected time to deliver PALS-UK and staff support.
- Clear and consistent structure

▪ Barriers

- Pupil absenteeism
 - Pairing on the spot
- Timetabling
- Classroom management – motivation.

Stakeholder Perspectives

- Pals structure and activities
 - 95% agreed partner reading quite/very useful
 - 89% paragraph shrinking 'loved teach summarising'.
 - 85% Retell –'snappy'
 - 76% prediction relay
- Partner reading '*more confident and comfortable.*'
- '*Substantial amount of solid reading time.*'
- Teachers mentioned missing elements to PALS-UK to support children for key stage 2 SATS such as vocabulary; however, builds confidence for longer text.
- '*high impact for minimal workload.*'
- Pupils enjoyed participating in PALS-UK. Paragraph shrinking most popular with the pupils. Partners were important. Prediction relay considered hardest.

What have we learnt?

- Implementation of PALS-UK is feasible and acceptable
 - High levels of compliance and fidelity, possibly tailing off after week 15 (logs, observations)
 - Positive feedback (surveys) and anecdotal
- Lessons in why
 - Make explicit why an approach does/should work
 - Make it easy to deliver but not inflexible
 - Give sufficient support and graduate practice, include support for decision making
 - Encourage dialogue, shared practice, accountability and monitoring
- Lessons in supporting differentiation
 - Identify and discuss needs to support needs of highest/lowest readers, SEND, EAL, different class sizes
 - Text choice

Starling: A Direct Instructional Approach to the Teaching of Reading/Tier 2 Vocabulary

(also known as PALS Plus)



What is missing from PALS?

- 2020/2021 We roll out PALS across Years 3 – 6.
- Initially, high level of self-regulation for the first time, children have a mechanism for requesting support with word fluency.
- After 6 weeks, children are no longer raising their hands – they are now broadly fluent.

What could happen next?

- What if we teach the children to self-regulate against unfamiliar vocabulary and we gave them definitions?
- What if we changed the script?
- What if during the course of a PALS session, we collected ALL of these words?
- What if we reviewed these words at the end of the PALS session and taught the whole-class what they
 - The New Script
 - *Hand raised, child points to the word if they do not know the meaning of a word...*
 - *Teacher: The word is scuttled, what's the word.*
 - *Child: Scuttled.*
 - *Teacher: It means short, quick steps...what does it means?*
 - *Child: It means short, quick steps.*
 - *Teacher: Good, now read the sentence again.*

Starling

- During the course of an average PALS+ session, 30 unfamiliar words are flagged via self-regulation.
- So the question is: what do we do with these words? This is where a 5th part was developed: Vocabulary Retrieval.
- A Defined approach to teaching unfamiliar vocabulary (predominantly Tier 2)



peady: small and round

hoard: big collection

aloft: held up high

succumb: give in to

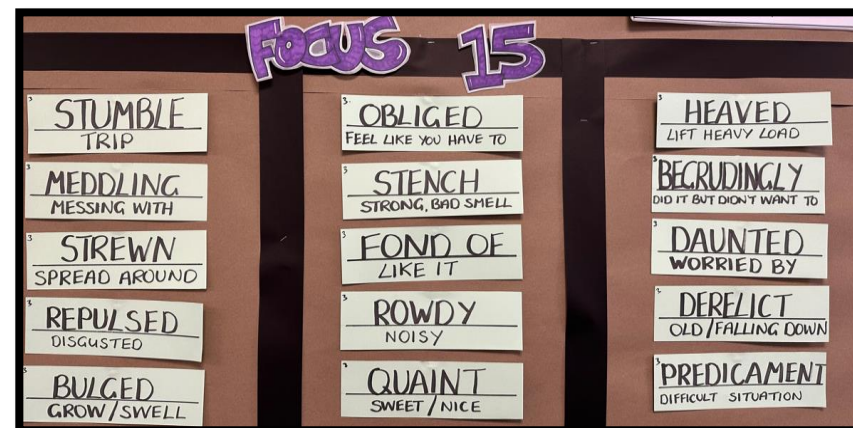
imitate: to copy

gorging: eating lots

consol'd: make them feel better

Vocabulary Retrieval

- Part 1: Whole Class Tier 1
 - (2.5 minutes)
 - Teacher: The word is 'delay'...what is the word?
 - Class: Delay...
 - Teacher: It means to make something late ...what does it mean?
 - Class: To make something late...
 - Teacher: You might say: This is really going to delay me...what might you say?
 - Class: This is really going to delay me...
- Part 2: Retrieval (2.5 minutes)
 - Reader 1 turns away from the board and Reader 2 asks Reader 1 the near synonym of three words. Once completed, the roles are reversed. This allows children to retrieve the meaning of the word.
- Part 3: Experimenting with contextual use (3 minutes)
 - We play with the words!
 - Part 4: Vocabulary Corner (2 minutes)



Retrieval Theory

NUISANCE ANNOYING	ADEQUATE OKAY	SWATHES WAVES OF	DISCRUNTLED UNHAPPY	SANCTUARY PLACE OF SAFETY
SELDOM NOT OFTEN	INTRICATE VERY DETAILED	VOW PROMISE	SAVOURING REALLY ENJOYING	SERENE CALM
OBSCURED HIDDEN	PERILOUS DANGEROUS	IVORY CREAM COLOURED	NIMBLE LIGHT ON YOUR FEET	VAGUE NOT CLEAR

- Week 1: Words are collected on the board. Five words each session are selected from the 10 (the most applicable). That is 15 each week. They are displayed on the board within the classroom.
- Week 2: We retrieve the same words from Vocab Corner.
- Week 3: Using the same words, we use them as flash cards.

Assessment

Focus 15: Week #1			
Vocabulary	Answer	Near synonym	Letter
odour		smell	A
tarnished		ruin	B
proficient		good at	C
seething		very angry	D
sodden		very wet	E
flourish		do well	F
dubious		not sure	G
revulsion		find it disgusting	H
tatty		worn out	I
simultaneously		at the same time	J
exceptional		very impressive	K
grotesque		ugly	L
contradict		say opposite	M
glare		angry stare	N
gradually		slowly	O

Week #1 Assessment			
Vocabulary	Answer	Near synonym	Letter
odour	J ✓	angry stare	A
tarnished	G ✓	at the same time	B
proficient	E ✓	do well	C
seething	L ✓	find it disgusting	D
sodden	N ✓	good at	E
flourish	C ✓	not sure	F
dubious	F ✓	ruin	G
revulsion	D ✓	say opposite	H
tatty	O ✓	slowly	I
simultaneously	B ✓	smell	J
exceptional	M ✓	ugly	K
grotesque	K ✓	very angry	L
contradict	H ✓	very impressive	M
glare	A ✓	very wet	N
gradually	I ✓	worn out	O

Case Study

- Using the PALS+ spreadsheet, we can now track the retrieval accuracy after 4 weeks.
- The current KS2 average is 11.5 words per week
- KS2 Outcomes are higher post-COVID than pre-COVID
- 2022 79% EXS 43% GDS
- 2023 84% EXS 30% GDS
- 2024* 86% EXS 40% GDS
- **Projected*

Stakeholder Perspective

■ Students

- *It can broaden your vocabulary and help you with words you maybe did not know* (Year 3 student)
- 'Sometimes you know what the word means but you can't use it in a sentence, it helps you understand how you can use the word when you are doing extended writing. (Year 5 Student)
- It helps you understand how you can use the word when you are doing extended writing. (Year 5)

■ Teachers

- Their writing is phenomenal... that use of tier 2 and tier 3 vocab... their writing has really improved because of the vocabulary element.' (Teacher)
- You can see it through their work and through the dialogue they use, that they are using those words and becoming really familiar with them. (Teacher)

Next Steps

- We have videos and a manual being prepared.
- Pilot evaluation with ten schools in the UK.



Thank you



Delivery team:

Emma Vardy (NTU), Helen Breadmore (UoB) Doug and Lynn Fuchs (Vanderbilt University), Kristen McMaster (University of Minnesota), Luisa Tarczynski-Bowles (NTU), many RA and teachers

Evaluation team (2022/23 trial):

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Thank you