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## Peer Tutoring in Reading/Mathematics in Primary School: Randomised Controlled Trials & Scaling Up



# Acknowledgements

Peter Tymms, Christine Merrell, Enliz D'Souza  
David Miller, Allen Thurston, Karen McGavock,  
Pauline Murray, Nora Conlin, Pat Caudrey,  
Sheona Goodall, David Orr, Andy Wiggins,  
Vic Menzies, Kirsty Younger



# What is peer tutoring?

"Gaining knowledge, understanding and skill through explicit active helping or supporting among status equals or matched companions so that both partners benefit"

(Topping & Ehly, 1998)

# Reading Tutoring Technique

## Paired Reading:

- Book difficulty - hard for tutee
- Read Together
- Signal for Reading Alone
- Simple correction
- Talking and Praising



# What's It Like in Class?



Professor Keith Topping

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# What's It Like in a Pair?



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# The Fife Project





# Design

Randomised controlled trial -  
different intensities/types of tutoring  
randomly allocated  
to 125 participating primary schools



# Skill/curriculum areas, types of tutoring, & intensity of intervention

	<i>Same Age</i>	<i>Cross Age</i>
<b><i>Maths</i></b>	Intensive Light	Intensive Light
<b><i>Reading</i></b>	Intensive Light	Intensive Light
<b><i>Maths and Reading</i></b>	Intensive Light	Intensive Light

# Details

- intensity is light (once per week) or heavy (three times per week)
- P4 (8 year old) and P6 (10 year old) pupils participate
- schools are very various: some are large urban primaries; others are small and might have pupils of several ages in one class
- two-year project – pupils followed into next year with new teachers



# Intervention

- Launch CPD day
- Pack of materials for every school
- Research Assistants visit all schools – offer further training, support and observation of implementation in 50% of schools
- Project operates Jan – May
- Follow-up CPD day
- Repeated for same children in second year

# Measurement

Performance Indicators in Primary Schools  
(PIPS)

In reading, mathematics, and other subjects

Occurring every two years before, during and  
after the project

Can compare project classes to other classes  
implementing and not implementing, and to  
other schools/districts, before and after



# Additional Measurement

Short-term in some schools in first and second years:

Observation of implementation

Norm-referenced test of reading

Criterion-referenced test of maths

Self-concept and -esteem measures

Teacher evaluations

# Results

PIPS – gain for cross-age tutoring  
( $ES=.2$ ), not same-age

Gains in self-esteem for tutors and  
tutees

Short-term gains in reading & maths for  
both tutors and tutees irrespective of  
tutoring type



# Results #2

Considerable variation between schools

Implementation fidelity reasonably good  
but not perfect

# Teacher Evaluations

1. Impact upon teaching (ITE)
2. Impact upon attainment/learning (IAT)
3. Impact on emotional aspects & dispositions to learning (IEMO)

all reporting positive impact:  
ITE 17.87 (sd 3.64) max 25  
IAT 26.69 (sd 4.87) max 35  
IEMO 36.09 (sd 8.23) max 50



# Conclusion – Intensity & Type of Tutoring

Intensity makes little difference in Reading or Maths, except in teacher evaluations

Type of tutoring – PIPS suggests cross-age better than same-age. Short-term tests suggest same-age equal to cross-age in short term.

Reading + Maths does better than Reading or Maths singly, but all do well in cross-age tutoring

Role of self-esteem may be crucial

# www.cem.org/fife/project

Address  <http://www.fifepeerlearning.org/>



## Fife Peer Learning Project



About us

Further details

FAQ's

Contact us

### *What Is the "Fife Peer Learning Project"?*

This project is designed to improve the educational provision in primary schools across a whole local government council through peer learning in reading and mathematics. Additionally, the project will explore the practicality and utility of such methods to support primary-secondary transition. Rigorous evaluations have already shown peer learning to be effective in many situations, but this project will be the first to establish and evaluate large-scale systematic implementation.

### *Aims*

1. To enhance the achievement of primary school pupils in: core skills in reading and mathematics, motivation & attitudes, and transferable social & communication skills.



# TES Pro

## ([www.tes.co.uk/TesPro](http://www.tes.co.uk/TesPro))

Section on peer tutoring has:

Views 20,020

Downloads of resources 6,268

as of 9 May

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# Durham Shared Maths

Shared Maths based on Duolog Maths

University of Durham established a Maths tutoring RCT intended to scale up the maths part of the Fife project

Four local authorities involved (Medway, Worcestershire, Leeds and Durham), again over two years

Local co-ordinators are responsible for training and monitoring teachers, while the university has trained the co-ordinators



# Maths Tutoring Technique

## Duolog Maths:

Listen

Question

Read

Make it Real

Praise

Pause for Think-Aloud

Check

Summarise & Generalise

# Number of Schools

	Phase 1		Phase 2	
	Originally	Currently	Originally	Currently
Durham	9	8	9	7
Leeds	10	7	9	6
Medway	13	12	15	12
Worcs	8	8	9	7



Mainly disadvantaged schools selected

6342 pupils

Data have been collected but need to be analysed!

# Questions, Discussion



# Contact

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