

West Dunbartonshire Council

# Reciprocal Teaching

## Raising Attainment through the Development of Higher Order Literacy Skills

Report compiled by West Dunbartonshire  
Psychological Service on the Two Year Literacy Hub  
Project funded by Scottish Government, June 2014

September 2012 – June 2014

## **Literacy Hub**

The Scottish Government published a Literacy Action Plan in 2010 with an overarching vision 'to raise standards of literacy for all levels from early years to adulthood.' Following this, the Scottish Government launched the Literacy Hub initiative in order to contribute to improving literacy outcomes. The key aim was to tap into a range of good practice in literacy in local areas through facilitating the sharing of approaches to literacy systematically between authorities. The 'Hub' project was launched in August 2012 in West Dunbartonshire and the summary of the full report, 'Literacy Hub/Consortia-based approaches to Improving Literacy Outcomes' which follows presents the achievements of the project over the course of two years of Scottish Government funding.

## **Background**

Development of higher order literacy skills is a key focus of the West Dunbartonshire Council revised literacy strategy which aims to contribute to the key educational services strategic objective of raising attainment and improving learning. Targeting the development of higher order reading skills through the adoption of a reciprocal teaching approach was identified to be reaping long term benefits in one of our primary schools. Over 7 years of development the West Dunbartonshire model demonstrated positive outcomes in both reading comprehension and pupil confidence and found that staff had a greater knowledge and understanding of teaching reading as a result of their reciprocal reading approach.

The work of experienced West Dunbartonshire teachers and further research into the evidence base for reciprocal reading led to the development of a model of reciprocal teaching which was shared across neighbouring authorities; Inverclyde and Renfrewshire, and within West Dunbartonshire. Staff from pilot primary schools observed practice and received training from Psychological Service staff and teachers who had implemented the model. This opened up a professional dialogue and increased collegiate working.

## **Reciprocal Teaching**

Reciprocal teaching, also known as reciprocal reading, is an instructional approach developed by Palincsar and Brown (Palincsar & Brown, 1984). They describe it as;

‘A procedure...where teacher and student took turns leading a dialogue concerning sections of text. Initially, the teacher modelled the activities of **summarising** (self-review), **questioning** (making up a question on the main idea), **clarifying** and **predicting**. The teacher thereby modelled activities: the students were encouraged to participate at whatever level they could. The teacher could then provide guidance and feedback at the appropriate level for each student (Palincsar & Brown, 1984, p124).’

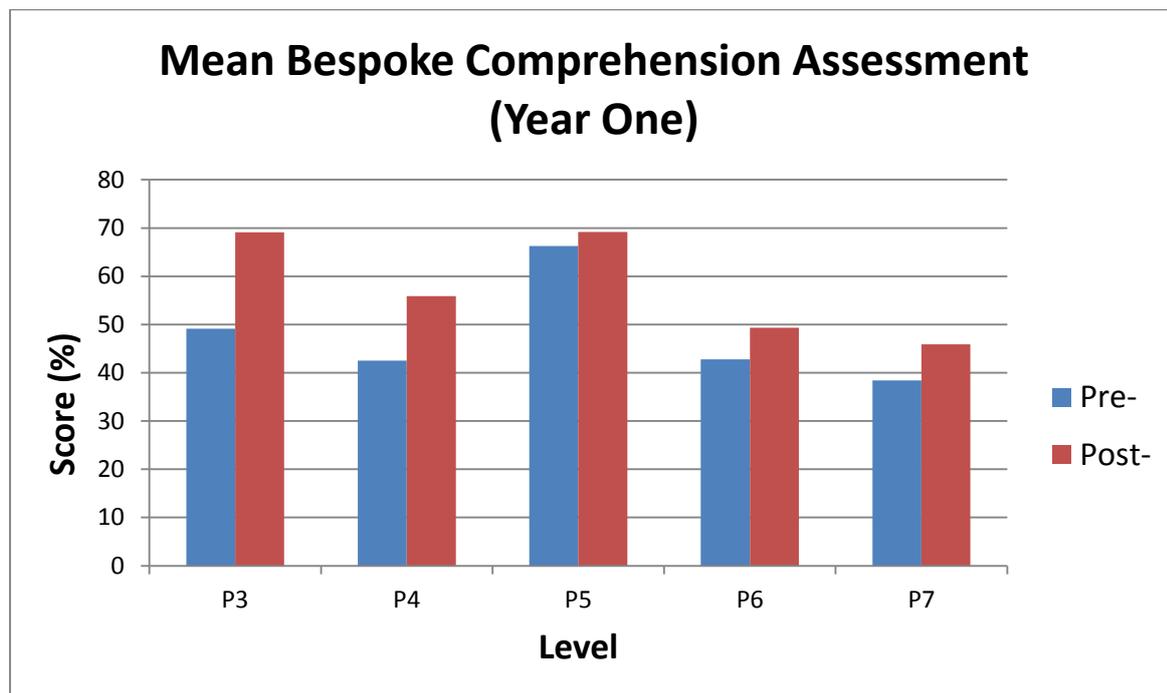
Alongside the introduction of the four strategies, the West Dunbartonshire approach incorporates four foundations (Oczkus, 2010). These are **scaffolding**, through gradual release of responsibility, pupils become more competent in implementing the strategies, **think-alouds** by the teacher making explicit to learners what good comprehenders implicitly accomplish, **metacognition**, the awareness of an individual’s own thinking and **cooperative learning**.

For a brief overview of Reciprocal Teaching, see appendix 1.

### **Evaluation Findings**

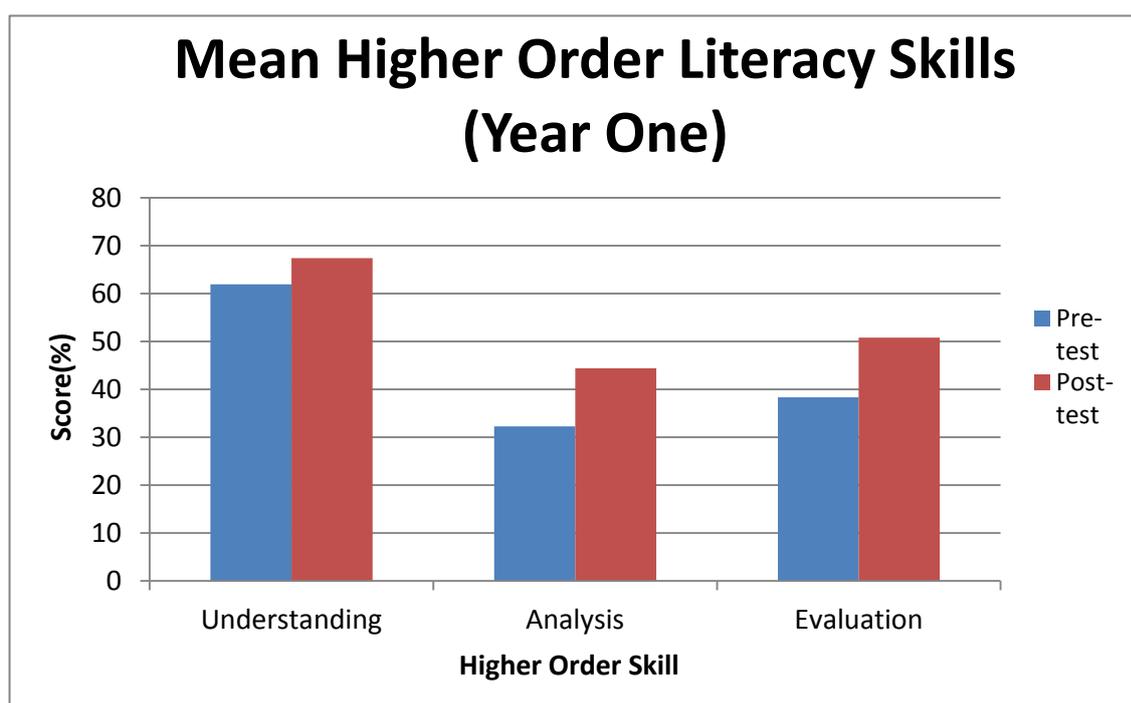
The implementation of Reciprocal Teaching in 4 pilot schools was monitored and evaluated over a two year period. The quantitative findings indicate a **consistent improvement in both pupil reading comprehension and in the development of higher order skills in pupil ability to analyse and evaluate text** over the two year period. Brooks (2013) in his review of interventions to improve literacy defines effect sizes of interventions as ranging from very small and probably not of educational significance, small meaning typical of a year of schooling, medium and useful and finally large and substantial. The results from our bespoke assessments of matched passages with comprehension questions found a **substantial** effect size from Reciprocal Teaching. In addition gains in reading comprehension, accuracy and rate beyond the expected maturation of pupils were evidenced through a standardised assessment with **pupils gaining 11 months in reading age over a 4 month assessment period in year one and 9 months in reading age over a 6 month assessment period in year two**. Pupil awareness of their own learning was also significantly improved, as well as their enjoyment from literacy.

Figure 1. Mean Pilot School Reading Comprehension Assessment Score.



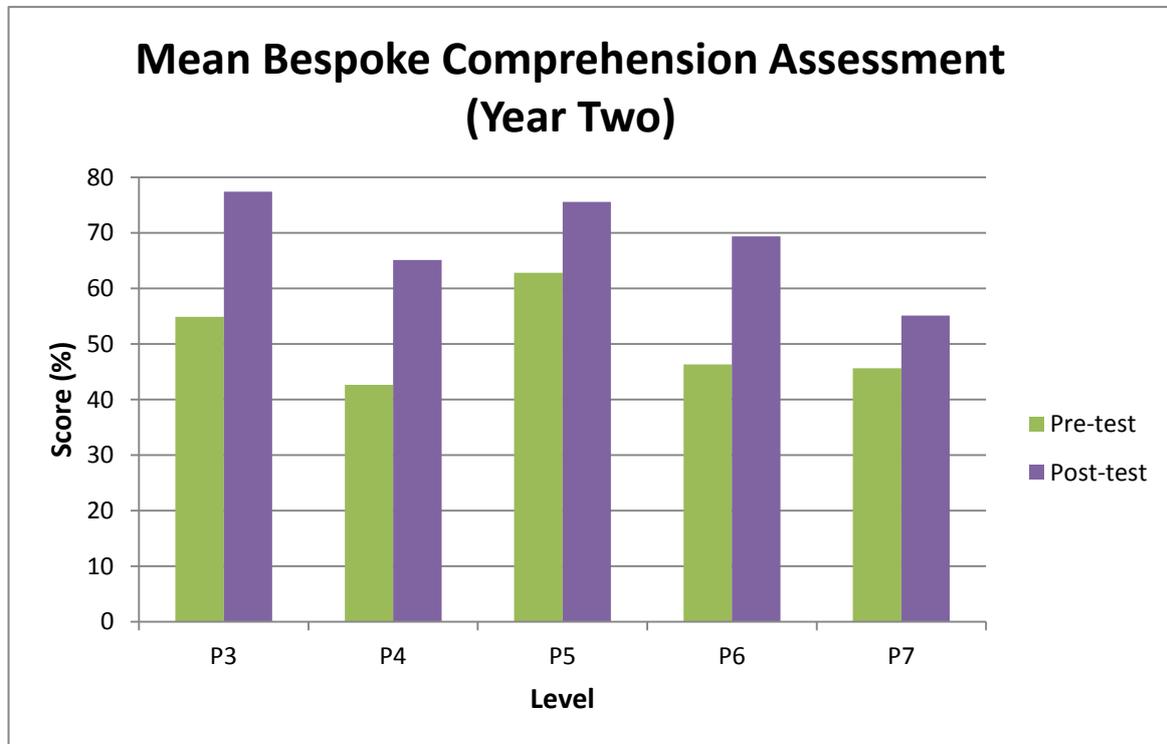
There were increases in comprehension scores from P3 to P7 with the greatest difference in P3. There was least change in P5, however, they were achieving above 60% before exposure to the approach. **The effect size, a difference between means on a common scale, was found to be substantial at 0.92 for the pilot schools.** An effect size for a typical year of schooling would be 0.4.

Figure 2. Mean Pilot School Higher Order Literacy Skills.



There were increases in each of the higher order skills with the greatest difference in pupil ability to analyse and evaluate text.

Figure 3. Mean Pilot School Reading Comprehension Assessment Score.



There were increases in comprehension score from P3 to P7. **The effect size was found to be substantial at 1.2.**

Figure 4. Mean Pilot School Higher Order Literacy Skills.

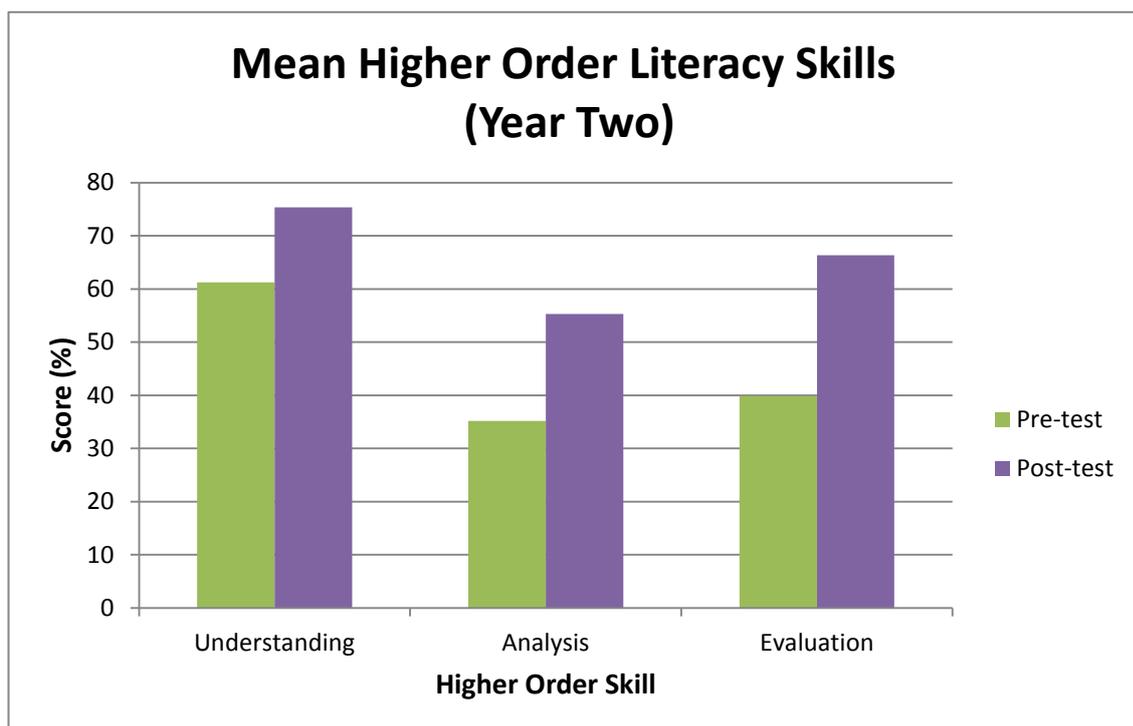


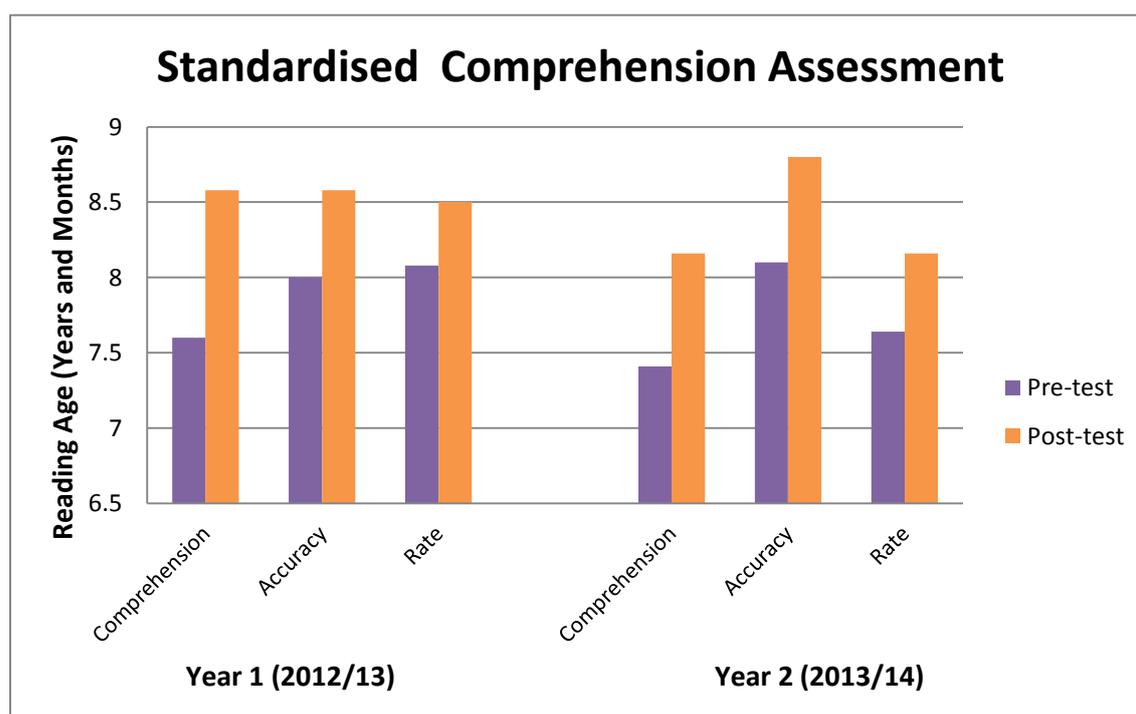
Figure 4 also demonstrates that the greatest increases in pupil skills were in analysis and evaluation.

As the bespoke measure of reciprocal teaching does not allow the improvements in comprehension to only be attributed to reciprocal teaching and some of the change may be due to typical development, a standardised measure of reading comprehension, York Assessment of Reading for Comprehension (YARC), was used with a small sample of pupils. Table 1 shows the YARC assessment average reading ages and the gains made in reading comprehension, accuracy and rate for the pilot schools implementing reciprocal teaching in year one and year two.

Table 1. Pilot school YARC assessment pre- and post- mean reading ages in years and months, gain in months and ratio gain.

		Pre-	Post-	Gain	Ratio Gain
Year One (c.a 7.4)	Comprehension	7.8	8.7	11	2.7
	Accuracy	8.0	8.7	7	1.8
	Rate	8.0	8.6	6	1.5
Year Two (c.a 6.11)	Comprehension	7.5	8.2	9	1.5
	Accuracy	8.2	8.10	8	1.3
	Rate	7.8	8.2	6	1

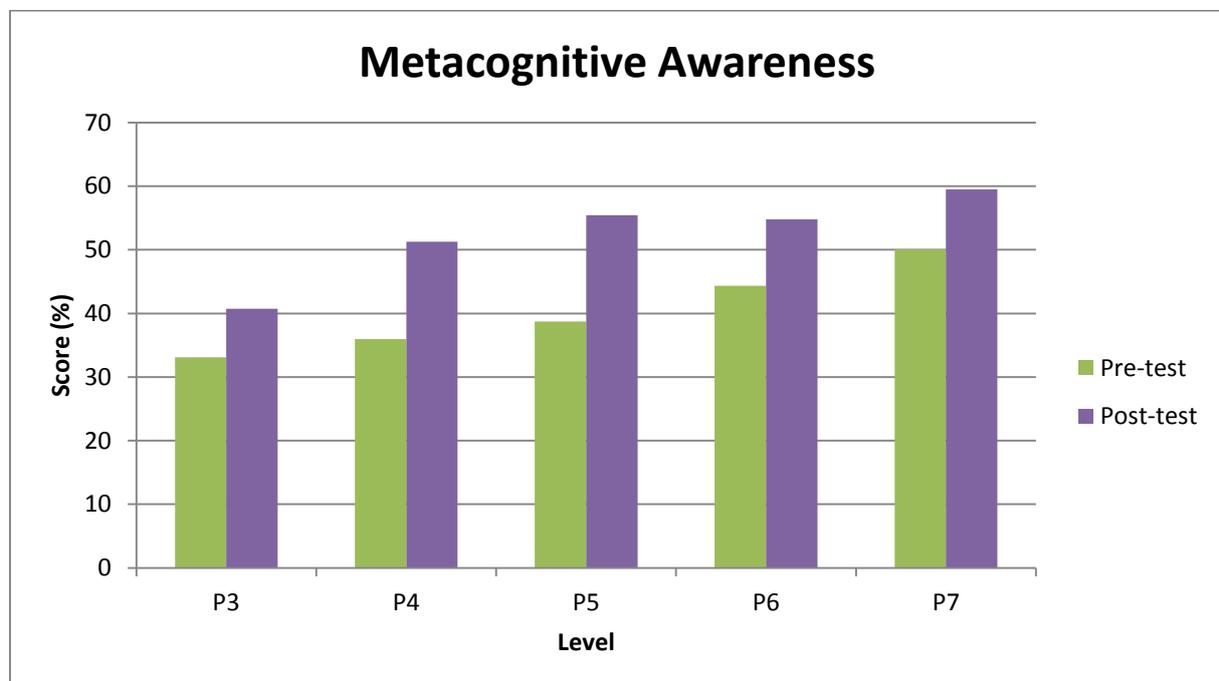
Figure 5. YARC Assessment of Reading Comprehension Mean Reading Ages.



In year one, there was a gain in comprehension of 11 months of the reading age of the pupils and the ratio gain was found to be 2.7 months over a four month intervention period. Ratio gain is the improvement in months for each month Reciprocal Teaching was implemented. Reading accuracy and rate also improved beyond that of the intervention period.

In year two, there was a gain of 9 months of reading age for comprehension over a 6 month intervention period which is a ratio gain of 1.5 months per month of implementation. It is useful to note that despite sampling pupils with mixed ability their initial reading age for comprehension was 7 years 5 months, 6 months ahead of their chronological age. The figure shows that over the two years there were **gains made in each of the reading skills** with the exception of reading rate in year two which maintained expected maturation. The results show that the **improvements are beyond what would be expected** with typical maturation and aside from improved reading comprehension, pupils are more able to answer inference and vocabulary dependent questions showing a greater analysis of the text.

Figure 6. Mean Metacognitive Awareness.



The Metacomprehension Strategy Index (MSI) is a scale that directly assesses pupil awareness of why and when a strategy is useful across six broad categories. Three categories directly link to the reciprocal teaching strategies of predicting, self-

questioning and summarising. The figure above demonstrates that there were improvements at every level from P3 to P7 with the greatest gains made in P4 and P5. Pupils improved their understanding of why a strategy is helpful with the greatest change in self-questioning. This was found to have a significant difference following the implementation of reciprocal teaching.

Pupils were involved in focus groups following the implementation of reciprocal teaching. Pupil feedback included;

'It helps you to learn words and understand things a bit better.'  
P4 pupil'

'I used to be shy and not really speak that much but now I'm much more confident.'  
P6 pupil

'It helps us learn strategies in a fun and friendly way.'  
P4 pupil

'We've improved our listening and talking skills by answering questions and using full sentences.'  
P7 pupil

Teachers took part in focus groups in both years of implementation. Their feedback included;

'I felt more confident because you know everybody is doing the same thing.'

'You're getting more from the children because you see they understand the strategies and are more confident in their reading ability.'

'I've seen a difference in how much more capable they are.'

'We're all learning together and we all see the benefits so we're happy.'

'It gave poorer children an opportunity to experience harder texts they wouldn't necessarily be able to read themselves.'

## **Transition into Secondary**

In order to ensure a coherent and consistent approach to the development of higher order literacy skills across the transition into Secondary Schools, Reciprocal teaching was introduced into a number of secondary schools. Each pilot primary linked with English specialists from their cluster secondary. English practitioners observed practice in the upper stages of their feeder primary and took part in team teaching before trialling it with a class of pupils in secondary. Qualitative feedback was collected from S1 pupils and English teachers which included plans for further staff training and the continued delivery of reciprocal teaching in English departments as well as initial steps to share experience to other staff within the school. The across authority sharing of practice and resources for secondary English teachers is planned to continue.

## **Reciprocal Teaching Resources**

Experienced staff from West Dunbartonshire contributed to the development of a reciprocal teaching guide for practitioners who had been introduced to the approach. The guide, 'A Practitioner's Guide to Reciprocal Teaching, Raising Attainment through the Development of Higher Order Skills,' was created to support teachers who have been trained to initially implement the approach and refer back to once they have introduced the model to their class. The guide includes sample worksheets and handouts for pupils and information and guidelines for implementing the approach. To support the guide, a DVD was developed and portrays teachers modelling the foundations of 'think alouds,' 'cooperative learning' and 'scaffolding of pupil learning.' The DVD also captures teacher professional dialogue regarding their use and implementation of reciprocal teaching.

## **Key Elements for Implementation**

Currently a small number of schools have embedded the reciprocal teaching approach into practice and a larger number are beginning to seek further training and encourage staff to use this methodology in their teaching. In order to replicate these research findings across the authority it is important the same key elements of the model are built in.

Key elements of the approach which have led to gains in reading comprehension include;

- Partnership working; close collaboration between experienced teaching staff and educational psychology staff.
- Whole school approach with introduction from P1.
- Monitored assessment from P3 to P7.
- Peer observations by HT and staff to monitor the teaching methodology and develop teacher skills.
- Use of Reciprocal Teaching across the curriculum in an interdisciplinary learning manner.
- High expectations set by HT.
- CTs engaging in collegiate discussion of teaching reading comprehension thereby building a culture of sharing within the school.
- Commitment to 6 ½ hours of literacy per week with at least 1 to 2 hours of Reciprocal Teaching.
- Clear responsibility accepted by SMT for whole school implementation and planning of Reciprocal Teaching.
- Training and on going coaching, in line with implementation science, from experienced teaching staff who can develop the pedagogy and Psychological Service staff who can outline the evidence base, the core elements necessary for impact and support the tracking and monitoring of the implementation.

### **Next Steps**

West Dunbartonshire Psychological Service has developed a plan to continue the roll out of the approach into each primary school to raise attainment across the area through the improvement of higher order skills in accordance with the West Dunbartonshire Literacy Strategy.

Progress will be monitored and tracked systematically to ensure fidelity of the approach. Teachers will continue to be trained and receive follow up coaching sessions in line with implementation science. Guides for collegiate sessions lead by practitioner's focusing on metacognition, think alouds, the early years, practical tools

and whole class lessons will be developed and piloted. Development work will extend into building on the initial steps taken at secondary and consider broadening of the approach into the Early Years.

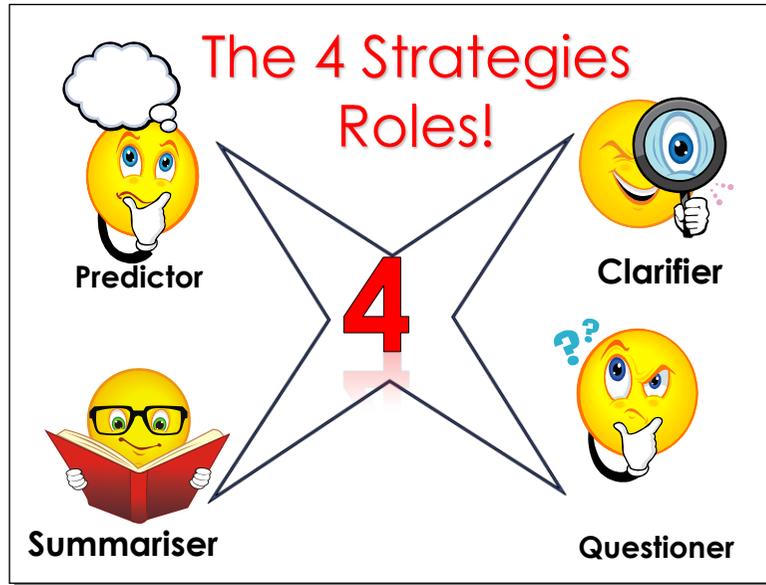
Shona Crawford, Principal Educational Psychologist

Gary McIlree, Senior Educational Psychologist

Joanna Grieve, Assistant Psychologist

West Dunbartonshire Project Team

## Appendix 1 – Overview of Reciprocal Teaching - Four Strategies and Four Foundations



### Plus a Leader or Big Boss

**STOP!**  
This means YOU.

- Decides who will do each job.
- Tells the group what to read.
- Invites each 'worker' to do their job after reading each chunk.
- Makes sure everyone is joining in.

### The Predictor

**Use what you have read or clues from the illustrations to help figure out what the group will learn or what will happen in the text.**

**You can change your predictions as you read on!**

- I think ....
- I'll bet...
- I wonder if .
- I imagine ...
- I suppose ...
- I predict ...
- I think this text will be about...

### The Clarifier

**Looks for words, phrases or sentences that you or your group do not understand**

**Tries to work out the meaning by using:-**

**CLUES**  
(illustrations, punctuation, bold print and italics)

**STRATEGIES**  
Think - what you already know about the world, you have experienced or read in another book

- Re-read the passage
- Read what comes next
- Sound the word out
- Look for little words inside big words.
- Think of a similar word
- Look for base or root words, prefixes, or suffixes.
- Look for a comma following an unfamiliar word  
(Sometimes the author will give the definition after the comma)

## The Questioner

Ask questions which will help the group to understand what has been read.

Thinks of questions to ask as they read the text.

- Who...
- What...
- When...
- Where...
- Why...
- How...
- What if...



## The Summariser



Tell the group what you have read in your own words.

Only tell the important information, not the little details.

Keep it as short as you can!

It is a reminder of what has been read so far.

- The most important ideas are ...
- The main idea is ...
- This part was about ...
- First, .... Next, .... Then, ...
- This story takes place in ...
- The main characters are ...
- The problem of the story is ...

## The Instructional Process: Four Foundations

1. THINK ALOUDS: *Watch me as I think and do*
2. SCAFFOLDING: *Watch me. Let's try together. Support with individual attention, materials, strategies.*
3. METACOGNITION: *How do you know? What are the steps? How does \_\_\_\_ help you read?*
4. COOPERATIVE LEARNING: *Pairs, tables, table groups, teacher groups, literature circles.*

## What does Reciprocal Teaching offer Teachers?

- A structure for teaching the skills required for enhanced comprehension.
- A method that is easy to resource.
- Can be used across the curriculum.
- Can be used as whole class lessons or group activities.
- Effective for pupils of almost all abilities.
- A mechanism for assessing comprehension skills and identifying areas for development.