

# Flash and self marking reduces workload for teachers, pupils feel more successful – A preliminary study.

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## PURPOSE OF RESEARCH

The focus of this research is how to reduce workload for teachers whilst ensuring that the impact on pupil progress is not negatively affected. The frequency and extent of marking requirements are the main cause of high workloads for teachers. The Government Workload Challenge survey (2014) identified that the reform of marking policies was the highest priority for schools. All marking should be meaningful, manageable and motivating for the pupils. It should be efficient and impactful.

At Alderman Bolton Primary School, our existing marking policy supports staff to implement a variety of marking approaches, including peer and self marking. This research focuses on mathematics lessons and looks at the impact of using flash marking and self marking - marking a selected number of questions but not necessarily all of them. Extended time for pupils to respond to the marking was provided.

The research was part of the Department for Education reducing workload project and made use of the gov.uk toolkit.

## THE RESEARCH DESIGN

A non-randomised, case-matched design with a pre- and post-test was used. To define the independent variable (Flash Marking), two existing groups of participants were case-matched across two conditions:



**IV Level 1 (Control Condition)** Y5/6 Normal teaching practice took place with normal marking (pink pen = correct, green pen = development point).

**IV Level 2 (Intervention)** Y6 Self/Flash marking to take place in mathematics. Teacher to provide oral feedback during the lesson through conferencing. Randomisation was not possible as the teacher leading the study was a member of the intervention group.

**DV1:** Attainment scores pre- and post-test

**DV2:** Teacher perception: Workload questionnaires pre- and post-test.

**DV3:** Pupil perception: questionnaires pre and post test

**DV4:** Teacher time: four teachers involved in the trial (x3 teachers in Y6 Intervention group, x1 Y5 teacher Control group)

## LIMITATIONS

The study was limited by the sample size and the mixed cohort (Year 5 & Year 6.) Using a Year 6 cohort as the intervention group and the Year 5/6 as the control group was a limitation in the pairing of pupil attainment data. However, the amount of progress was measured rather than attainment. In future studies, the same cohort could be used.

## METHODS

### Participants and sample size

The research took place at Alderman Bolton Primary School which has high levels of socio-economic deprivation. Two Key Stage 2 classes took part in the study. 25 pupils from a mixed-ability Year 6 class and 25 pupils from a mixed-ability Year 5/6 class. A total of fifty participants took part in the study (21 boys and 29 girls).

### Procedure

Pupils in the intervention Year 6 class completed self and flash marking at the end of every mathematics lesson. Flash marking is the process of making marking faster, focused and more useful. It enables the teacher to provide oral feedback during the lesson and pupils to self mark a select number of questions at the end. The pupils in the Year 5/6 control class, had their mathematics books marked by the teacher which was in line with the current marking policy. Marking in pink pen would identify correct answers and green pen would highlight any developmental points.

## MATERIALS

### Pre and post tests:

- The Year 6 Mathematics SATs papers alongside teacher assessment.
- Bespoke teacher questionnaires were given to all teaching staff before the study and repeated with only the teachers involved – post-test.
- Pupil questionnaires to the control and intervention groups – pre- and post-test.
- Mathematics books – pupils marking with purple pen to indicate flash/self marking took place.

## CONCLUSIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

Results from this preliminary study indicate that flash and self marking reduces teachers' workload without any negative effect on pupil progress. Furthermore, it also indicates that pupils feel more successful because they have instant oral feedback and they can identify what they have achieved through self marking.

Future research may wish to explore if the same effect could be obtained within a different year group or key stage.

## RESULTS

### Mathematics Test Results

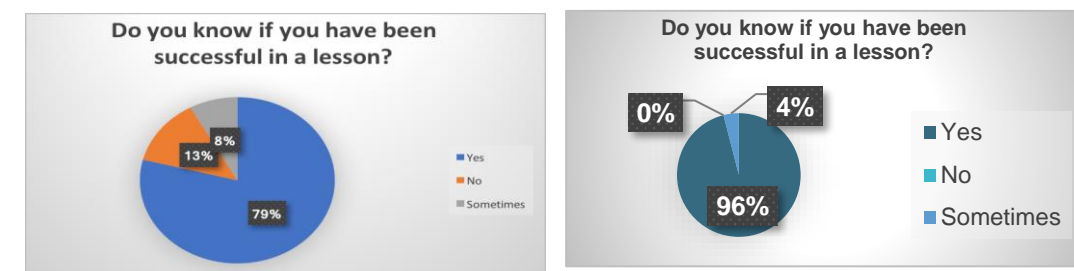
Gain scores were first calculated using pre- and post-test results. A two-tailed Wilcoxon signed-ranks test indicated that the flash/self marking had a significant ( $p = 0.008$ ) positive effect compared to the existing teacher marking (control condition) ( $r = 0.469$ , CI (95%) = 0.390 – 0.548) ( $d = 1.049$ ).

### Pupil and teacher questionnaire

Pupils in the intervention classes report that they felt successful in 96% of cases. However prior to the intervention this was 79%. In the control group, this remained similar, 75% pre-test and 78% post-test. Teachers were asked a range of questions in relation to marking and workload. Pre-test teachers identified that they spend five to ten hours marking per week. Post-test, the intervention teachers identified that they spend two to four hours marking per week.

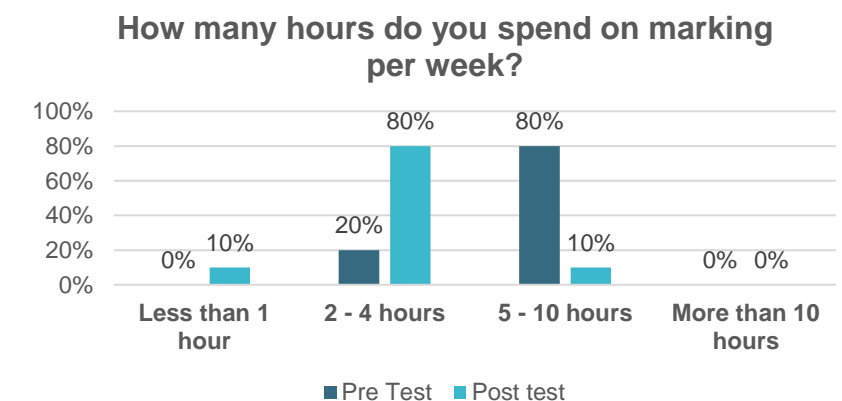
**Figure 4:** Pre- and post-test, number of pupils who said they were successful in a lesson for control and intervention groups. A 2x2 chi squared test of independence showed that there was a non-significant positive effect ( $p = 0.271$ ) ( $w = 0.061$ )  $d = 0.123$ , CI (95%) = -0.094 - 0.340.

	Pre-test	Post-test	Total
Control	75	74	149
Intervention	76	96	172
	151	170	321



### Teacher time marking

**Figure 5:** Pre- and post-test, the amount of time teachers spend on marking per week.



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