National College for Teaching & Leadership

Closing the gap: test and learn

Teacher led randomised controlled trials - Feedback

January 2016

Contents

1 What is the early adopter strand of closing the gap: test and learn?

The delivery of comprehensive training for teaching schools participating in the closing the gap: test and learn programme covered rigorous and robust research methods appropriate for use in schools, including quantitative research methods such as RCTs, so that teachers gained an awareness of research methodologies (set-up, design and evaluation) and were able to contribute effectively to the trials. This also ensured that teachers in different contexts were able to deliver the interventions under trial in a consistent manner. The strand of work delivered through the RDNE events focused on training teachers in the delivery of small-scale RCTs (and other forms of experimental research) and immediately yielded school-level activity. In response to this, the NCTL made available 50 ‘early adopter’ grants to support participating teaching schools and their alliances in delivering their own small-scale RCTs. A total of 48 of these studies were presented at a conference poster event at NCTL in Nottingham on 21 October 2015.

2 Research posters

This supplementary document to the main closing the gap: test and learn report contains examples of small-scale trials (micro-enquiries) that were designed and run by teachers, with support from the project team. The teachers running each trial produced a research poster to display at the dissemination event in October 2015, similar to the way that postgraduate researchers present their work at conferences.

50 schools were funded to carry out micro-enquiries as part of closing the gap: test and learn. 47 posters were produced in all. 2 studies were not completed as a result of factors outside the control of the teachers. 1 further study was completed but the school did not produce a research poster in the correct format.

The posters contained in this document all relate to interventions aimed at improving feedback to pupils.

Peer feedback is equally effective in improving pupil progress in essay-writing at A-level as teacher feedback: preliminary evidence.

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Introduction

Effective feedback is considered key in increasing the progress made by pupils in a variety of areas, including writing (Black & William, 1998). Specifically, research indicates that peer feedback can be more effective in improving essay-writing skills of students at university when compared to tutor feedback (Nicol & Macfarlane-Dick, 2006; Boud, Cohen & Sampson, 1999; Topping, 1998). Studies amongst students at higher education establishments have suggested peer-feedback can lead to:

1) increased understanding of success criteria
2) a *dialogue* between peer and student which is considered a less threatening way of receiving feedback
3) greater exposure to alternative strategies and perspectives
4) improved judgement which can be transferred to own work, and
5) increased motivation (Nicol & Macfarlane-Dick, 2006).

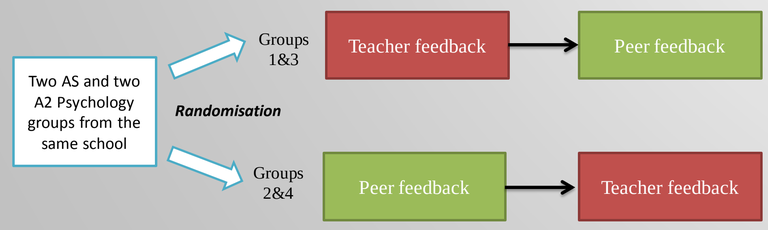
Nevertheless, very little research has examined the efficacy of peer-feedback during A-level in improving essay-writing; a key component of examinations in humanity subjects and often one students report to be the most difficult. The aim of this study was to establish whether pupils make more progress in essay-writing following peer-feedback than teacher feedback using a randomised controlled design.

Research Design

A within-subject design was used with a pre- and post-test. To address the aims of the research the independent variable of feedback was operationalised by creating two conditions:

IV Level 1 (Control condition): Teacher feedback (current practice)
IV Level 2 (Intervention): Peer feedback

To account for order effects, the groups were counterbalanced.



Method

Participants

Participants were AS and A2 Psychology students (*N:* 52): 28 AS students and 24 A2 students. Participants were *all female* in mixed ability classes. Forecasts ranged from D-A. Classes were allocated into the first condition using random allocation (as it was impractical to randomly allocate individual pupils due to timetabling considerations). Random allocation was done using a die. An even number meant the group was a control group (teacher feedback), whilst an odd number indicated the group was an intervention group (peer feedback). Following the intervention period (2 essays) the groups were swapped around (counter-balancing) such that those receiving teacher feedback, then received peer feedback and vice versa.

Procedure

Pupils in both conditions (teacher and peer feedback) completed an essay with the same title, following teaching of the same content prior to the lesson in accordance with a pre-set lesson plan (to ensure content was delivered in the same way).
Following completion of the essay, a third-party teacher marked and moderated the essays and awarded a mark. All essays were anonymised.
In the control group, the teacher gave written feedback on the essay to the pupil (as this is the current practice). Pupils then had an opportunity to reflect on their work and to ask questions on their feedback but no one-to-one feedback sessions were provided in order to mimic current practice. In the intervention group, pupils received written and verbal feedback from their peers working in pairs. Both teachers and peers gave feedback using the same criteria (current mark bands for essays). To minimise the effect of extraneous variables, the same amount of time was allocated to the teacher and peer feedback sessions.
Pupils in both groups were then given a week to re-do the essay based on the feedback received. The final essay was graded and moderated by a third-party teacher. Progress was measured in terms of marks gained from the first version to the second version of the essay.
This process was repeated on two occasions with two separate essay titles. The groups then reversed (i.e. control group became intervention group and vice versa to eliminate the effect of participant variables).

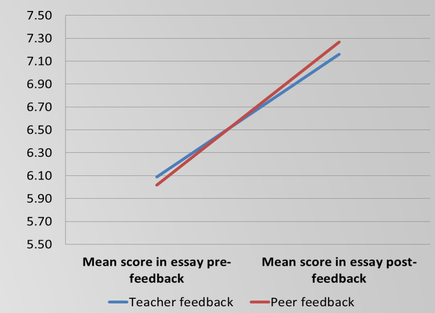
Materials

All essays set were past exam questions from the AQA B Psychology specification. For both the teacher and peer feedback conditions, the original mark scheme from the specification was used alongside simplified generic mark bands to guide feedback and awarding of grades. Standardised lessons were delivered prior to setting essays with the same PowerPoint slides.

Results

Attrition

In order for results to be suitable for analysis, students needed at least one pair of results from the intervention condition and one pair from the control condition. As the study finished in the third term, high attrition rates were seen in the A2 groups due to pressure to start revision for their exams. Consequently, final analysis was based on data from only *28 students*.



Statistical analysis

Analysis revealed abnormally distributed data, hence the Wilcoxon signed-ranks test (two tailed) was conducted using the pre-post Wizard Test v7.00 on gain scores.
No significant differences were found in progress made following peer (Mdn: 1.25) versus teacher (Mdn: 1.00) feedback W(23)=0.49, p=0.63 (two tailed). Peer feedback appears to have a small, insignificant effect on pupil progress (r=0.06).

Conclusion

The results show that when re-doing the essay pupils made similar amounts of progress regardless of whether feedback was given by a peer or their teacher. Importantly, across both conditions, essay scores appear to have improved. This suggests that teachers could consider regular use of peer assessment alongside teacher feedback as this would not disadvantage students.
Nevertheless, due to high levels of attrition, the sample obtained is not large enough to detect a significant effect size. Consequently, further data needs to be collected within the Psychology department at Swanshurst and in collaboration with other schools to ensure reliability and validity of the above results.

References

- Black, P., & Wiliam, D. (1998). Assessment and classroom learning.*Assessment in education*, *5*(1), 7-74
- Boud, D., Cohen, R. and Sampson, J. (1999) Peer learning and assessment, *Assessment and Evaluation in Higher Education*, 24(4), 413-426.
- Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: a model and seven principles of good feedback practice.*Studies in higher education*, *31*(2), 199-218.
- Topping, K. (1998). Peer assessment between students in colleges and universities. *Review of Educational Research*, *68*(3), 249-276.

Research and Development Teams

Increased accountability through coaching and mentoring, has a positive impact on the progress towards more effective marking and feedback.

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Introduction

As middle leaders, holding staff to account within their roles is traditionally done through a timetabled cycle of formal meetings, book scrutiny and observations. We wanted to investigate the impact of more informal and frequent coaching and mentoring sessions on teachers' progress towards effective marking and feedback. These sessions were carried out in addition to the formal cycle of monitoring.

Research design

Elements of a blind design will be used as participants will not be aware of the condition to which they have been allocated. A pre and post test in the form of a RAG rated review, teacher and pupil questionnaire will be used. To address the aims of the research the independent variable of increased accountability will be operationalised by creating two conditions.

IV Level 1 (Control condition): base level support following the school's own system.

IV Level 2 (Intervention): Increased levels of coaching and mentoring focusing on marking and feedback.

Method

Participants

- Within school 3 class teachers will be chosen to be the control and will participate in the school's regular cycle of monitoring.
- 3 class teachers will receive increased informal coaching and mentoring focusing on marking and feedback.
- As this is a blind design, none of the class teachers would be aware that an intervention was taking place.

Procedure

- Collate RAG rated review of current marking and feedback practice for class teachers to form a benchmark.
- Control and participant class teachers to follow school cycle of formal monitoring of marking and feedback.
- Ensure each participant teacher receives three additional and informal coaching and mentoring sessions over the test period.
- Complete a post test RAG rated review and collate information from participant and control teachers to compare progress towards the target.
- In addition to this, teachers and pupils will complete a pre and post test questionnaire to rate confidence levels in marking and feedback.

Materials

- A pre and post test RAG rated review of marking and feedback will be completed.
- Pre and post test teacher and pupil questionnaires.

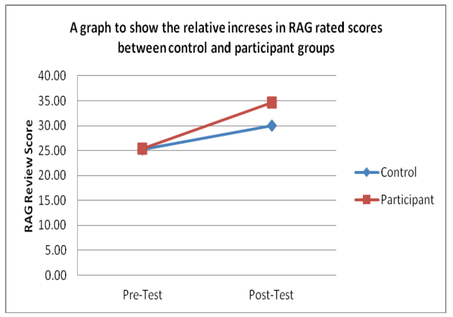
Data analysis

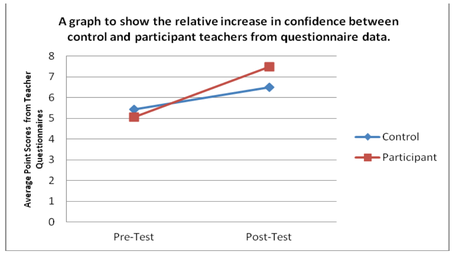
- The colours on the RAG rated review were given a numerical value. An average was taken of the control and participant groups to give the test quantitative data. The pre and post test results were then compared and analysed to establish a significance.

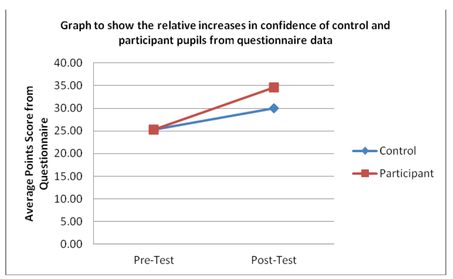
Results

A Mann-Whitney U (one-tailed) test was used. This indicated a significant ($p=0.025$) difference between participants who received additional coaching and mentoring sessions and those who did not.

These results were supported by analysis of pre and post test teacher and pupil questionnaire data using the Mann-Whitney U (One-tailed) test which demonstrated a significant ($p=0.023$) difference between control and participant groups.







Conclusions

This trial suggests that the use informal coaching and mentoring sessions has a positive impact on the progress of staff towards effective marking and feedback. This has been a small pilot study which has looked at the progress of staff towards an area of school development. It could be continued further to investigate the impact on pupil progress as a result of the improvements made in this area.

South Bromsgrove High
Inspiring Confidence Through Learning

A preliminary pilot study into the impact upon student engagement and attainment when directly responding to teacher's feedback

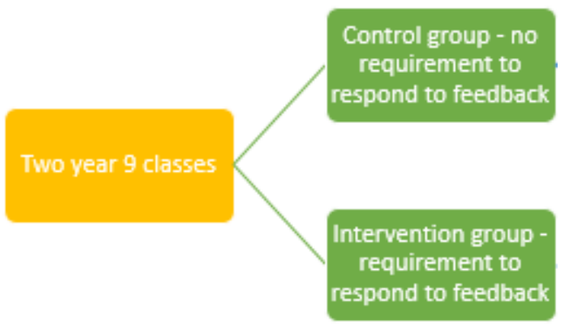
South Bromsgrove teaching alliance
Liam Booth (Teacher of Geography)

Introduction

Ofsted (2012) judged South Bromsgrove High to be Outstanding in every aspect, but highlighted marking and feedback as an area for development. As is commonly known, studies have found that feedback is an essential construct for theories of learning and an understanding of the conditions for effective feedback should, ultimately, facilitate student development. Indeed, the EEF suggest effective feedback can equate to 8 months' worth of progress. In recent times, the thought has been that for feedback to be highly effective, student interaction and engagement is necessary. However, it is not yet clear just how significant the impact is upon students' learning with regards to engagement and attainment.

Research design

A between subject design was used with a post-test analysis. In addition, pre-defined ability groups were stratified by gender and then randomly allocated to the control and intervention groups.



Method

Participants

Two year 9 Geography classes at South Bromsgrove High School in Worcestershire of similar, and pre-defined, ability were first stratified by gender and were then randomly allocated in to the control and intervention group. The sample size totalled 59 students and contained 29 boys and 30 girls.

Procedure

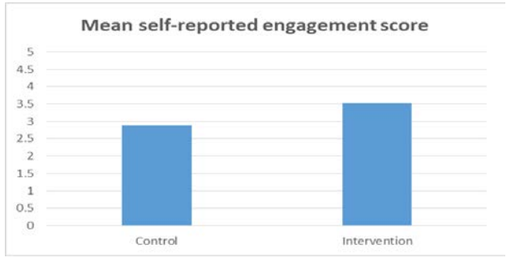
Before beginning the study, and for the benefit of those students in the intervention group, the sole teacher delivered a brief tutorial on how best to respond to feedback in their exercise books. Students were expected to respond to feedback at the beginning of their weekly Geography lesson and it was the teacher's responsibility to provide feedback in their exercise books after each lesson. The students in the control group still received the same level of feedback but there was no expectation to respond to the feedback; only to read it. The study ran for a duration of 8 weeks which contained 7 lessons on the topic and 1 end of unit assessment lesson.

Materials

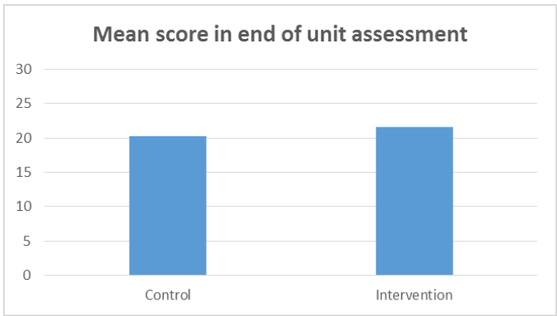
Students participated in a wide range of activities during their half termly topic study. This was delivered by the same teacher and in the same manner to both classes. At the end of the topic, students took a standardised assessment which contained a broad range of questions (1 mark, 4 marks, 6 marks and 8 marks) encompassing much of the content covered in the previous weeks. In addition, each student completed a questionnaire which asked students to respond to a set of questions regarding engagement and confidence using a likert scale(s).

Results

A Mann-Whitney U test was applied to pupil's self-reported engagement scores. This indicated a significant (p=0.008 (one tailed)) improvement in student engagement with the topic when they were expected to interact with teachers feedback (Mdn=3.5) compared to the control condition (Mdn=3.0). This represented a medium effect size (r = 0.33).



A Mann-Whitney U test was applied to year 9 student's attainment in their end of unit key assessment on the topic 'polar environments'. This showed no significant (p=0.251 (one tailed)) improvement in student attainment when they were expected to respond to teachers feedback (Mdn=23) compared to the control condition (Mdn=20). This represented a minimal effect size (r=0.114).



Conclusions

This research suggests that students interacting with teacher's feedback has a minimal effect upon student's attainment. Interestingly, this research did highlight a positive impact upon student's own engagement with the topic and perhaps if this study was continued; engagement would bear fruit with a more significant difference in attainment.

Limitations

The research was limited due to the sample size involved and also, the short duration of the study. Therefore, we recommend that any further study should be extended over a longer period of time and with a larger sample size.

Preliminary study into the effects of giving dedicated improvement and reflection time (DIRT) after feedback on written work has been provided

Liz Samuel
The Queen Katherine School October 2015

Introduction

Having considered evidence on the impact of encouraging students to act on feedback, The Queen Katherine School introduced "the purple pen of progress".
Students were given time to respond to feedback adding commentary to their work in purple ink.
This study sought to investigate the effectiveness of this strategy at KS5.

Research design

A within subjects design was used with a post-test only.
The independent variable (DIRT) was operationalised by creating two conditions.

IV level 1 – when work was returned students were encouraged to work out the meaning of the codes on their work (control condition).

IV level 2 – when work was returned students had to work out the meaning of the codes on their work and re-write a paragraph so that it demonstrated a higher level of skill (experimental condition).

Order effects were controlled by counter balancing.
The groups were randomly allocated to the order in which conditions were experienced.

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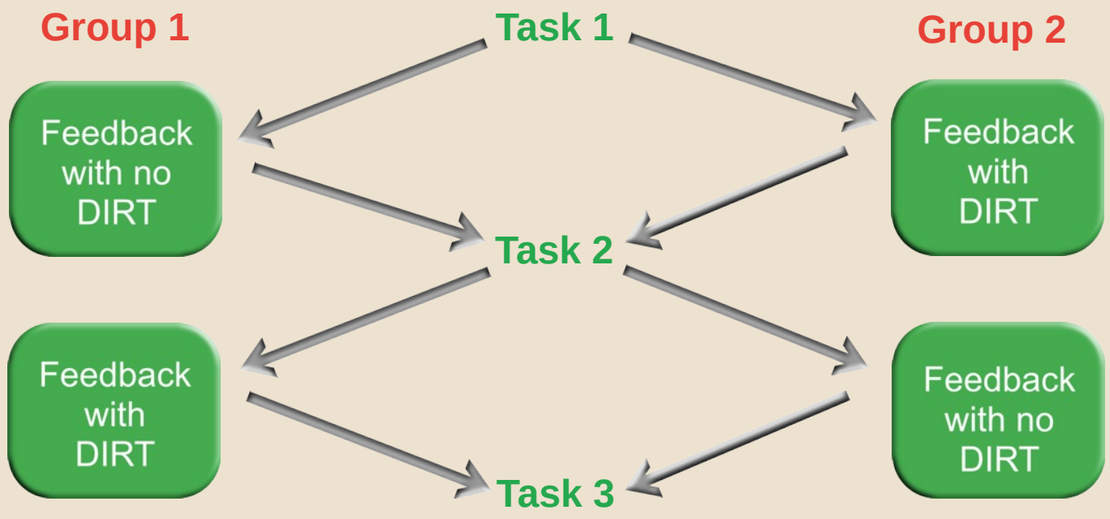
Method



Participants

Two sociology groups studying AS sociology participated in the study.
The groups contained a similar balance of predominantly female students and were of similar prior attainment as measured by GCSE scores.
In total 24 students completed all of the tasks in the study and therefore had results that could be included.

Procedures

Five lessons were planned for the study and delivered to both groups in the same way.

Lesson 1. Students were given guidance on completing a 'methods in context' (mic) question and then completed one during the lesson
Lesson 2. This answer was returned in the following lesson with each paragraph coded so students could identify the quality of the content and the range and quality of skills demonstrated. One group was given DIRT time to follow up, the other group asked to read through the codes and match them to their paragraphs.
Lesson 3. As part of this lesson, students answered a second mic question.
Lesson 4. The second answer was returned in the same way as in lesson 2 but the group getting DIRT time was switched.
Lesson 5. A third mic question was answered.

Student's answers to task 2 and task 3 were then ranked to create post-test ordinal data with 1 as the best piece of work.

Materials

A set of codes for marking methods in context questions was designed for the study.
This meant that all students received standard feedback on their work.

Results

The Wilcoxon signed rank test indicated that the differences in results between control and experimental group were not significant and that DIRT did not significantly improve the impact of feedback on attainment in the next piece of work. ($p = 0.067$ one tailed, $r = 0.158$).
The median for condition 1 (control) was 26.00, the median for condition 2 (experimental) was 22.5

Conclusions

As anticipated, results in this pilot study were non-significant because of the small sample size. In addition, despite working with 32 students in total, only 24 attended all five lessons and completed all three pieces of work. We intend to replicate it with a larger sample of students.

Students were working on a particular type of examination question.
Results in the final examination were much better than for previous cohorts on this particular question.

Pupils' progress does not increase if effort related written feedback is used in addition to other regular feedback types

Louise Kirk
Cranbourne Business and Enterprise College

Introduction

There is evidence from studies into developing growth mindsets in students that suggests that students who receive oral feedback based around effort become more resilient and develop their own strategies to overcome challenges, which speeds up the progress of student's overtime. Therefore, if this is reinforced in written feedback, students' progress should improve over time against those who didn't receive effort related written feedback.

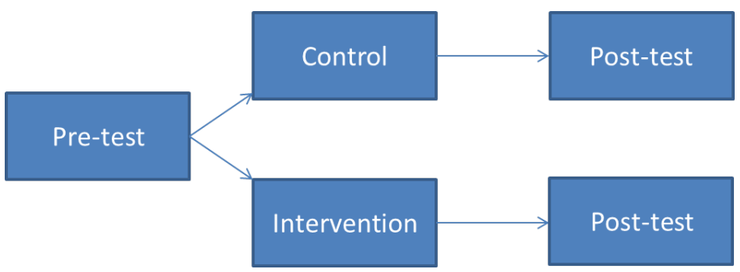
Carol Dweck argues that there are two types of mindsets; fixed or growth. In a fixed mindset, people believe their basic qualities, like their intelligence or talent, are simply fixed traits. They spend their time documenting their intelligence or talent instead of developing them. They also believe that talent alone creates success—without effort. In a growth mindset, people believe that their most basic abilities can be developed through dedication and hard work—brains and talent are just the starting point. This view creates a love of learning and a resilience that is essential for great accomplishment.

Research design

A between-subject design was used with a pre- and post-test. To address the aims of the research, the independent variable of intervention type will be operationalized by creating two conditions.

IV Level 1 (Control condition): Verbal effort linked feedback only along with previous feedback types

IV Level 2 (Intervention): Verbal and written effort linked feedback along with previous feedback types



Method

Participants

- Pupils from 5 different classes in 4 different subject areas (Maths, Science, Rs and MFL) participated in this study (the important point is that they were all taught the same information by the same teacher in their lessons).
- All pupils did a pre-test and pupils were randomly allocated into either the control group or intervention group, stratified by gender and whether a pupil is in receipt of pupil premium funding or not.
- 60 pupils were allocated to the control group, and 61 pupils were allocated to the intervention group.

Procedure

- Once the groups had been selected and the relevant permissions to do the work obtained, the groups were asked to complete a test in the classroom. This test was marked and formed the pre-test scores for each student.
- The randomly allocated intervention group then received regular verbal feedback and written feedback which is effort linked while the control group receives only verbal feedback of this type, alongside any previous feedback types they had been receiving.
- The lesson content and teacher did not change in any other way over the 6 week period.
- All pupils were then tested again using an identical test to the pre-test. These scores formed the post-test scores for each student.

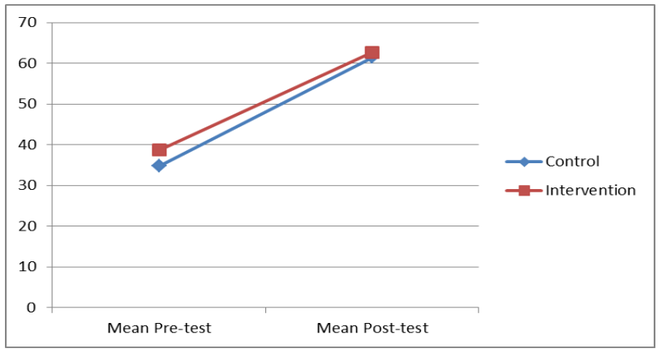
Materials

- A comment bank was created that could be referred to when given student written feedback
- It was also ensured that the tests were appropriate and relevant, and gave a percentage score for each student involved.

Results

Using gain scores an independent samples t-test (equal variance assumed) two tailed, indicated that the progress of students who did not receive written effort related feedback (mean difference = 26.75, SD = 15.08) was not significantly lower (t = - 0.86, df = 119, p = 0.390 (two-tailed)) than those that did receive written effort related feedback (Mean difference = 24.1, SD = 18.61). Cohen's d shows a small effect size (-0.156).

	Mean Pre-test	Mean Post-test
Control	34.8	61.5
Intervention	38.7	62.7



Conclusions

The progress of students does not appear to be affected by receiving effort related written feedback, alongside any of the normal feedback they received. Researching the effects over a longer period of time (perhaps 12 weeks) with a larger sample size covering, with increased frequency of effort related feedback would be recommended, along with distinguishing between high, middle and low ability students to measure the impact on different groups of students.

I was unable to use a matched pair design due to the significant differences in students pre-test. If I were to use a larger sample, preferably from one year group, then I would be able to match students prior to randomisation.

As existing practice has been used as a control condition, then the intervention can be seen as an alternative treatment, however, the extra time for teachers to use the intervention rather than existing practice would imply that there was no benefit to using the new intervention.

There are also some outside factors to consider – students may be receiving 'fixed mindset' language in other subject areas or outside of school. To prevent this having an impact on the study, it would be useful to have discussions with students prior to the start of any new study to make students aware of the different types of language used and the influence of this.

The Winston Churchill School

In association with Wellington College Teaching School Partnership

Preliminary evidence that 'in lesson' feedback through OneNote may improve student progress

Introduction

As part of our ongoing investigation into finding effective ways to utilise technology to enhance learning, we wanted to measure the impact of constant, personalised feedback within lesson.

OneNote is a piece of software that allows a teacher to allocate each student an area where they can complete their work whilst enabling the teacher to read and attach written comments at all times.

The trial was set up to test these benefits:

1. Immediate feedback allowing revisions to take place as they happen.
2. An awareness of being monitored impacting the quality of student work.

Research design

The originally planned design was a pre-post test counter-balanced within-subject design, incorporating 4 teachers teaching 2 units of work:

Teacher	Order of work	
A	Unit 1 - Intervention	Unit 2 - Control
B	Unit 1 - Control	Unit 2 - Intervention
C	Unit 2 - Intervention	Unit 1 - Control
D	Unit 2 - Control	Unit 1 - Intervention

The original design controlled for order and intervention. Additionally, each student would submit a form conveying the impact of the research foci during that lesson.

Technical difficulties undermined this design and resulted in a within-subject design with no counter-balancing for either element, in which all classes completed the intervention after the control condition.

Method

Participants

Whole classes were originally allocated to condition orders, however, this counterbalance was not able to be sustained. Consequently, ability setting meant that the classes that were involved were not of uniform ability. The total number of participants in the study was 63 (28 boys and 35 girls).

Procedure

Control: students worked on paper as normal, with no technology. The teacher monitored progress through their normal practice of moving around the classroom.

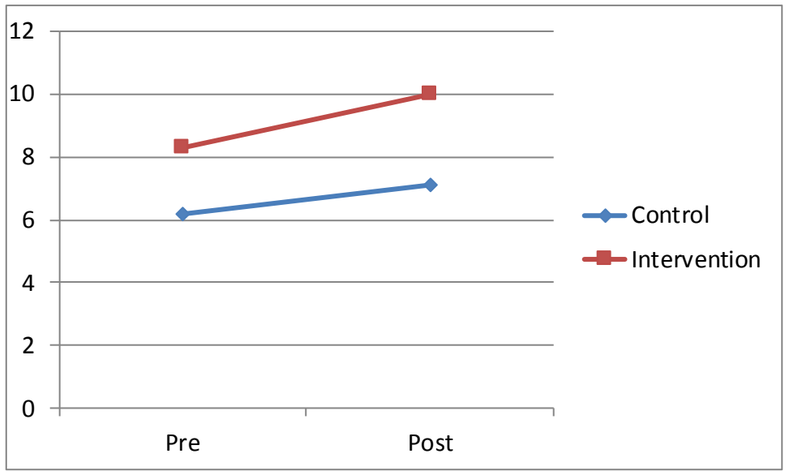
Intervention: students used a tablet and complete their work on OneNote. The teacher monitored progress through normal practice of moving around the classroom, but additionally accessing and annotating their work via OneNote.

Materials

The pre and post tests were the same test in each case. These were standard department assessments. There were no additional academic materials.

Results

Gain scores were first calculated from pre- and post-test scores, then outliers were removed. A Wilcoxon signed-rank test (one-tailed) indicated a significant increase in progress for the intervention compared to the control ($p = 0.002$ (one-tailed)) – a medium positive effect size ($r = 0.277$).



Conclusions

The outcome of the research ($r = 0.277$) showed a moderate positive effect on progress. However, the trial was not counterbalanced which means that although the trial was carried out with two separate sets of students, the topics and intervention took place in the same order with the same teacher. Carry-over or order effects may, therefore, have influenced the results. Additionally, we did not try to control for technology, so the difference between the control and the intervention was not just the feedback.

Despite the problems, where the intervention took place, teachers reported very high levels of engagement with the intervention.

The evidence shows that this kind of intervention may provide a way forward, but would need a more robust replication of the trial to establish the findings further.

Verbal and visual-digital feedback on creative writing in rural primary schools improves progress rates compared to written feedback – a preliminary study

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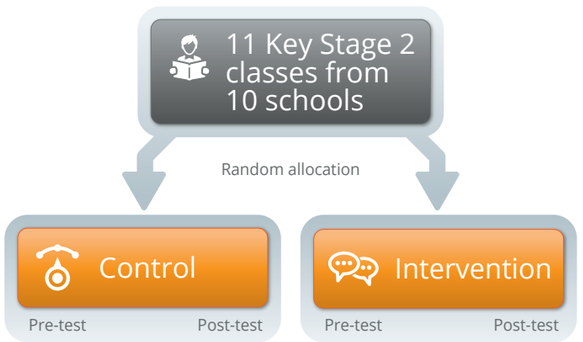
School Alliance

Purpose of the research: Research evidence suggests that effective feedback has a significant impact on pupil progress. Initial trials show the positive impact of digital feedback on outcomes in writing, and the impact may be greatest on SEND (Special Educational Needs and Disability) and FSM (Free School Meals) children. This is an important area to explore using a randomised controlled trial design because it is an approach that is poorly studied at a time when many schools are investing significantly in new digital technology. The study was conducted with the support of a grant from the National College for Teaching and Leadership as part of the Closing the Gap: Test and Learn programme.

The research design

A between-subject design was used with a pre- and post-test. To address the aims of the research the independent variable was operationalised by creating two conditions:

- IV Level 1 (Control condition)
  – Written feedback, the school's normal practice
- IV Level 2 (Intervention) – Digital feedback



Methods

Participants, sample size and randomisation

Eleven classes from ten rural primary schools participated in the study. Pupils were randomly allocated to a control or intervention group in each class. In total, 231 Key Stage 2 pupils (120 boys and 111 girls) took part in the research (113 in control and 118 in the intervention). The total number of FSM pupils was 42 (18.18%), which is below the national average (NA) of 26.6%. The total number of SEND pupils was 40 pupils (17.3%) which is slightly above NA of 16.6%.

Procedures

The randomly allocated groups were given a writing prompt, success criteria rubric and video, together with a short film as a writing stimulus. Pupils had ten minutes' planning and 40 minutes' writing time. The control group received written feedback; the intervention group received feedback digitally. Each group had the same amount of 'fix it' time the following day. Pupils made corrections and recorded 'What I have learnt' statements. Pupils were then given another piece of creative writing (of the same genre) the following day. The procedure was repeated. The work was marked against the two success criteria points and the gain scores were recorded. Blinded marking of approximately 10% of the work was then undertaken.

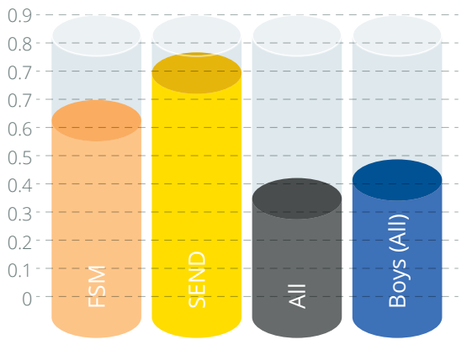
Materials (and apparatus)

A success criteria rubric was used along with a model text. Models of written and digital feedback (through video) were used to standardise marking. A format was given to pupils regarding how to correct their work following feedback.

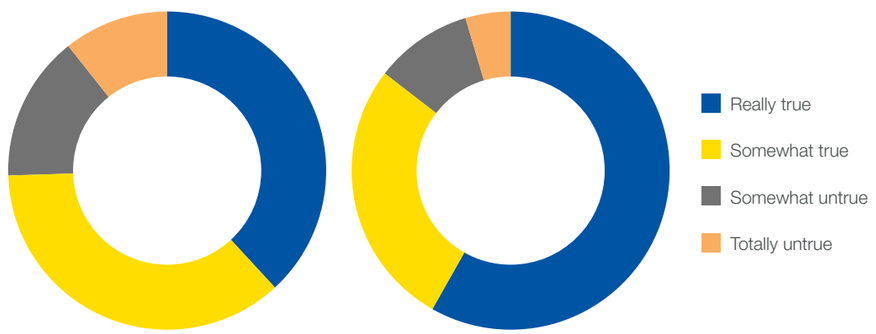
Results

Gain scores were first calculated. Mann-Whitney U tests indicated a significant improvement for all pupils who underwent the intervention compared to the control, and for sub-groups. There was a moderate positive effect size for disadvantaged pupils (n = 43, p = 0.03 (one-tailed), r = 0.308) and SEND pupils (n = 40, p = 0.013 (one-tailed), r = 0.37); and an overall small positive effect for all pupils (n = 231, p = 0.004 (one-tailed), r = 0.218).

Gain scores for all pupils and sub-groups



Pupil perceptions of written vs digital feedback (n = 153)



I think my work gets better following written feedback from my teacher

I think my work gets better following digital feedback via an iPad from my teacher

Limitations

The trial was limited by its relatively small sample size and therefore requires replication with greater numbers. Although the results suggest a greater impact on boys it is not clear why this is the case. Although the effect of the intervention was greatest on SEND pupils the trial did not take into account the specific different needs of these pupils.

Conclusions and recommendations for future research

The gains in the present study were similar to prior EEF research evidence, with regard to the impact of digital technology on closing the gap in attainment (which suggested that digital technology may produce gains of +4 months' progress over an academic year). In particular, the data suggested that the intervention produces the greatest gains for disadvantaged and SEND pupils. The survey that looked at pupil perceptions indicated that, in general, pupils feel they make better progress following digital feedback, evidence which backs up the findings in the RCT. Previous research has also suggested that gains may be even more substantial in mathematics; therefore a future study may wish to look at different subject areas. A future study may also wish to take into account different types of SEND pupils and any difference in effect depending on type of special need.

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