Changing Mindsets

Key Conclusions

1. Pupils who received the growth mindset workshops made an average of two additional months' progress in English and maths. These findings were not statistically significant, which means that we cannot be confident that they did not occur by chance. However, the finding for English was close to statistical significance, and this suggests evidence of promise.

2. Pupils whose teachers received the professional development intervention made no additional progress in maths compared to pupils in the control group. These pupils made less progress in English than the control group, but this finding was not statistically significant and we cannot be sure that it did not occur by chance.

3. FSM-eligible pupils who were involved in the professional development intervention gained a better understanding of the malleability of intelligence.

4. Intervention and control schools were already using some aspects of the growth mindsets approach. This may have weakened any impact of the interventions.

5. Future trials could examine the impact of a programme that combines the two interventions and runs for a longer period of time.

What is the impact?

Pupils who received the growth mindset workshops made an average of two additional months' progress in both English and maths compared to those in the control group. These findings were not statistically significant, which means that we cannot be confident that they did not occur by chance. However, the finding for English was close to statistical significance, and this suggests evidence of promise. Pupils whose teachers received the professional development intervention made no additional progress in maths compared to pupils in the control group. These pupils made less progress in English than pupils in the control group, but this finding was not statistically significant and we cannot be sure that it did not occur by chance.

The evaluation also measured the impact of the interventions on pupils’ theories of intelligence, using measurements created by Dweck (1999). Pupils involved in both interventions achieved higher scores on these measures than those in the control group, but the security of these findings is low and it is possible that they occurred by chance. The professional development intervention led to higher scores on the growth mindset measurements for pupils eligible for FSM and this finding is secure.

Previous research from the US has suggested that growth mindset interventions can have a positive impact on attainment. Good et al. (2003) found that using university students to teach pupils about the malleability of intelligence led to large improvements in standardised tests.
### How secure is the finding?

The pupil workshop intervention was evaluated using a randomised controlled trial involving six schools and 286 pupils. The findings from this evaluation have moderate to low security. Pupils were randomly allocated to receive either the intervention or an active control group where they received the same amount of extra support with study skills, but without the focus on developing a growth mindset. This comparison allows us to isolate the impact of the focus on growth mindsets and conclude that any impact was not caused simply by pupils receiving extra time and attention. The security of the trial was weakened when one of the six recruited schools withdrew from the project as this reduced the number of pupils in the analysis.

The teacher training intervention was evaluated using a randomised controlled trial involving 30 schools and 1,505 pupils. The findings from this evaluation have moderate security. Schools were randomly allocated to receive either the intervention or a ‘business-as-usual’ control group, where teachers did not receive any extra training as a result of participation in the trial. The security of these findings was limited by evidence that the intervention and control groups had different numbers of pupils eligible for free school meals and different average levels of prior attainment. This introduces the risk that any difference in outcomes between the two groups is caused by the different composition of the groups, not by the impact of the intervention. The evaluator attempted to control for these differences using statistical techniques in the final analysis.

There was some evidence from the process evaluation that teachers in the control groups of both trials were already aware of growth mindsets theory and using it to inform their practice. This previous exposure to the approach may have weakened the relative impact of the intervention.

### How much does it cost?

The estimated cost of implementing the pupil workshops intervention over three years is £397 per pupil per year.
The estimated cost of implementing the teacher training intervention over three years is £16 per pupil per year (£678 per school per year). Over the single year of this evaluation the teacher training intervention cost £49 per pupil (£2,035 per school). Teachers required two half days of supply cover to participate in the teacher training, which schools might choose to deal with in ways that may or may not incur a financial cost.