

## KNOWING WHAT WORKS

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### STATEMENT OF THE PROBLEM

Teachers must make decisions about the teaching strategies they use. These decisions may be based on intuition, the latest fad or government initiative or on scientific evidence about the effectiveness of a practice.

### PROPOSED SOLUTION

Teachers should take into consideration the scientific evidence on the effectiveness of teaching strategies and curricula. Scientific evidence can take several forms – large scale studies of groups of students, studies of individual students, or a convergence of evidence from various sources. This briefing looks specifically at large scale studies.

### HOW DOES IT WORK?

Studies of a new educational practice have to demonstrate not only that it works, but that it also works better or more efficiently than existing practices. Studies must thus compare the new treatment with existing or alternative treatments. It is also important to show that student learning and progress is the result of the intervention being examined, not to other changes such as students becoming older, or teacher or location variables.

The 'gold standard' is research where participants are randomly assigned to treatment or control groups, and where the data gatherers are unaware of the group to which students have been allocated. Information on outcomes should be collected and evaluated without the researcher knowing which treatment the participant has received. Then the

outcomes of the different groups can be compared to identify the most effective treatment. This is obviously difficult in educational research where researchers have to work within existing structures of schools and classes. It is also difficult to keep students and teachers ignorant of which treatment is new. It should be possible, however, for those who gather and interpret the data collected to be unaware of the group to which a particular student, school or teacher belongs.

Good quality studies will be made available for scrutiny in peer-refereed scientific research journals where other researchers have judged the research to be sound and appropriate for public dissemination. Ideally, any new practice will be supported by more than one study and will have a sound theoretical model on which it is based.

### WHAT SHOULD TEACHERS LOOK FOR

Are there research studies supporting its efficacy published in peer-reviewed journals?  
Is there more than one study, and do the studies support one another?  
Is there an accepted, coherent theory to support the practice?  
Is there converging evidence from research and theory, perhaps from different fields?

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