Talk of educational tools these days is usually about sophisticated technology, but academic and author Anthony Shaddock advocates the use of paperclips and a few disposable cups. Most professionals, including teachers, are expected to collect and analyse data to improve their performance, says Shaddock, professor of special education at the University of Canberra and author of *Using Data to Improve Learning: A practical guide for busy teachers* (ACER Press, 2013).

A simple but effective method of collecting data is for students to put a paperclip or token in one of five cups as they leave class. The cups have labels ranging from ‘This lesson was useless’ to ‘Extraordinarily useful’.

“This is an example of where data tells the truth,” says Shaddock. “Even though your impression was that the lesson was great, the students may or may not agree with you about its impact on their learning.

We have our own favourite methods of teaching, but are they effective? The evidence is in the data.”

He notes that most research indicates that about 30 per cent of variance in learning depends on what teachers do in class, so using data from students is a valid route to better outcomes. Data from anecdotal comments can be grouped under ‘positive’, ‘negative’, ‘neutral’ and ‘don’t care’, then further organised into major themes, he says.

“There again, you can be low-tech and just use different coloured highlighters.”

**Three-source method**

Teachers need at least three sources of data, says Irene Lind, an ACT Department of Education and Training project officer who works with teachers who have undertaken projects based on Shaddock’s methods. They may include pre- and post-class surveys, form attendance rolls, parents, student results, NAPLAN results, and data from observing students or from a colleague watching how they teach.

Lind says teachers can be enthusiastic about using data because it enables them to say “I know this works because I have the evidence”.

Some teachers have difficulty getting the principal to consider their ideas, she says. “However, through this process, teachers can present evidence for their team or school to consider when making decisions on programs, resources or new initiatives.

“I’ve seen principals allocate more funding to a program or expand it school-wide as a result of the data inquiry process teachers have used.”

These days, you need evidence to justify a change such as introducing a new program,” Lind says.

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Data in action

Harrison School, a primary school in the ACT, investigated the effectiveness of personalised learning plans for its Aboriginal and Torres Strait Islander students last year.

“We wanted increased attendance, increased engagement and increased ownership,” says Year 1 and 2 executive teacher Angela Bonner. Thirty-two students chose ‘strongly agree’, ‘strongly disagree’ or ‘I don’t know’ in response to each of four statements:

- My personalised learning plan helps me.
- I know my personal goals.
- The school values Aboriginal and Torres Strait Islander culture.
- I would like a lunchtime club to get to know others.

An additional three questions addressed attendance and engagement:

- What do you most like about school?
- What could the school do to help new students?
- What could the school do to support you?

It was an easy task for students to complete, says Bonner. “We realised they needed contact with each other to make connections, and the data from the questionnaire confirmed what we observed.”

The students were also asked to put a star on an XY axis on a large wall chart, indicating how much they knew about their personalised learning plans and about their goals.

“Too many responses were near the zero end,” says Bonner. Common words from the written responses were highlighted and the free online survey tool SurveyMonkey was used in collation. Students now identify areas of improvement themselves, rather than the teacher telling them what they need to do.

“I asked one student ‘What do you want to get better at?’ He said, 'If I practise every day, I can get better at reading.' He knew what his goal was. Another said, 'I want to control my temper and count to 10 when I'm feeling mad.' In class, I remind him of his goal.

“These students came up with their own goals. They own them.”

The students’ goals and their accompanying photos have been laminated and are accessible to them at all times in the classroom and at home.