



TLRI interview: Lynne Whitney

Findings from the various international assessment studies New Zealand takes part in are a rich resource for educational researchers, says the Ministry of Education's senior manager research, Lynne Whitney.

“They are powerful in that they capture lots of information from across New Zealand and other countries in areas important for New Zealand education. They tell us the kinds of skills and knowledge students have attained and, in the studies relating to Years 5 and 9 students, we hear from teachers about some of the specific strategies they use.”

She is talking about assessment studies such as the OECD's PISA (Programme for International Student Assessment) and ALL (Adult Literacy and Life skills) and the International Association for the Evaluation of Educational Achievement (IEA) assessments such as TIMSS (Trends in International Mathematics and Science Study) and PIRLS (Progress in International Reading Literacy Study). These assessments and others are run in New Zealand on a regular basis, managed through the Ministry of Education. While the Ministry of Education reports on the main results and does some further analysis from the data, there is real scope for research questions to be generated, in particular through the TLRI lens of the implications for teaching and learning.

She says it's important for researchers to understand the nature and purpose of the assessments and the differences between them. PISA was designed to focus primarily on providing policy makers with information on students as they neared the end of compulsory education. The results often feed into national and international educational, economic and labour market indicators. So PISA looks at students' competencies in reading, maths, science literacy and problem solving once they have been in the school system for about 10 years, and assesses whether they can apply their knowledge and skills to everyday situations. Schools for all studies are selected randomly, usually by an overseas study centre. The PISA assessment involves about 30 students at each randomly selected school, and over 4,000 students in all. And while PISA can look at achievement across schools, it can't look at classroom-level achievement.

The IEA suite of assessment studies can look at achievement at the class level, since they are carried out within whole classes. Like PISA, they measure skills and knowledge, and they also contain questions which probe student attitudes and engagement. Teachers answer a series of questions, such as the reading activities they carry out in the classroom, and what proportion of time they spend on different aspects of teaching and other activities. Parents are sometimes surveyed as well.

ALL assesses skills in the adult population, with households selected at random. People who are eligible are asked literacy, numeracy and problem-solving questions, and the interviewers gather other information on topics such as income levels and reading habits.

New Zealand has taken part in PISA since 2000, and the others for longer, throwing light on national performance in reading, mathematics, problem solving, civics and science.

“Our participation in these studies has resulted in a great deal of information,” Lynne says. The reports mostly describe achievement data and its links to other factors measured by the studies. To explore more complex relationships between different factors and achievement, hypotheses need to be developed and tested, particularly if the implications for teaching and learning are to be teased out.

For example, in PISA students are asked about their self-concept—their sense that they can achieve. By looking at this information in relation to their scores on PISA, it is clear that in general, the greater their belief in themselves, the better their achievement.

“If self-concept or self-belief is critical, then we need to ask what that means and what it might look like in the classroom and what can be done to shift perceptions. What we can do is use the data to generate questions that can be followed up at school, in the classroom or elsewhere.”

In other cases, researchers’ interest might be stimulated by something where the New Zealand experience is quite different from other countries.

For example, PIRLS shows that New Zealand teachers appear to be keen on silent reading relative to many other countries. “You look through the information the teachers supply, and you think: ‘What is it about our assumptions about how children learn that leads us to focus on silent reading? When does silent reading support student progress? Is it good for some students and not for others, and what is it about silent reading that may best support progress in reading?’ There is a lot to unpack.”

Lynne says the studies should provide ideas and provoke a response in researchers. One approach is to test PISA data to see what it actually means in a particular New Zealand context. A Norwegian study is currently looking more deeply at disruptive behaviour through classroom observations. Negative perceptions about the level of disruptive behaviour have been regularly reported for Norway through PISA. But what does disruptive behaviour look like, how do teachers deal with it and what impact does it have on other students?

There is also scope to look across the studies. A Ministry of Education researcher is doing some work using data from ALL and PIRLS exploring the link between adult literacy and being read to as a child. ALL asks parents if they read to their children, and, in a PIRLS’ survey, parents are asked about reading to their child, what they read and whether there are books in the home. It’s rich data that hasn’t been brought together before.

There is information about science in a number of the studies, including the suggestion our students are doing a lot of note-taking. “Is this true in all New Zealand classrooms? If it is, what is likely to be the longer term impact on learning science?”

Lynne acknowledges the data sets themselves can be daunting, requiring knowledge of sophisticated measurement models. But she says the reports from the studies contain a great deal of material that is accessible to a range of readers.

She says some people don’t put much store on these large-scale studies, because they think they don’t reliably represent the full picture of what New Zealand students can do.

“But first, we get such consistent results within surveys over time and across surveys. The degree of correspondence between us and Australia is also often quite amazing. And secondly, nobody would argue that these studies provide a full picture of what our students can achieve, but they are very powerful in showing us how our students can apply the skills and knowledge they are acquiring and some of the things that performance can be related to.”

“I would like to see more people reflecting on this information and thinking about what it actually means for the teacher and the learner in classrooms in New Zealand.”

The studies are easily accessible through the Education Counts website. The links are provided below.

www.educationcounts.govt.nz/goto/PISA

www.educationcounts.govt.nz/goto/PIRLS

www.educationcounts.govt.nz/goto/ALL

www.educationcounts.govt.nz/goto/TIMSS

Lynne Whitney is senior manager, research, at the Ministry of Education, Wellington.