

Benefits of Participation in International Studies of Student Achievement

Australian education authorities place great importance on participating in international student achievement studies that are targeted at improving student performance. Two such studies are the *Trends in International Mathematics and Science Study* (TIMSS), and the *Programme for International Student Assessment* (PISA). Both provide important information on the achievement of Australian students relative to that of students in other countries, and identify factors that have influenced this achievement.

All Australian states and territories and the Australian Government contribute funding to cover the costs for students from a sample of schools to participate in TIMSS and PISA. Sampled schools and students are selected to ensure that their overall results will be a reliable and valid indication of the results had all Australian students participated in the sample.

International benefits

PISA and TIMSS are highly regarded international studies of student achievement. By participating in these studies Australia becomes part of the international education community that, through research, aims to improve student outcomes globally. Student results from PISA and TIMSS, and the analysis of these results to identify factors impacting on the outcomes, are reported in publications that are distributed internationally and discussed widely by people with an interest in school education.

PISA is conducted every three years, and TIMSS is conducted every four years. Ongoing participation in these studies enables us to monitor student achievement over time and to examine our standing relative to many other countries. 46 countries participated in the latest cycle of TIMSS which was held in 2002/03, and 41 countries participated in PISA in 2003, including all 30 member countries of the OECD.

While the varying cultural and curriculum settings of participating countries and students need to be taken into account when interpreting the outcomes, international studies such as TIMSS and PISA provide an opportunity to compare the performance of students not only in countries that are similar in language and culture to Australia but also in countries that are not similar. For example, the continued success of some Asian countries in mathematics and science has caused some other countries to seek out the possible factors that may have led to their success.

The importance of strong literacy and numeracy skills in the population cannot be understated. Student achievement in school is a key determinant of later individual success in education and work. Recent research has also suggested that improving levels of literacy and numeracy in the workforce is associated with better economic outcomes for the nation as a whole. These skills are fundamental for improvements in productivity, innovation and competitiveness, and it is important that we are able to monitor and benchmark the effectiveness of our schools in developing these capabilities in our children not only across Australia but also internationally.

National benefits

For Australia, participation in international studies enables policy makers and educators to compare the performance of Australian students with students in countries which may be our near neighbours, our trading partners or our competitors.

Domestically, international studies provide information on how well Australian schools are providing for the educational needs of various sub-groups such as students with language backgrounds other than English, Indigenous students, geographically remote students and students from different socio-economic backgrounds.

International studies also provide information on the strengths and weaknesses of Australian students in particular subject domains such as reading, mathematics and science, and more generic areas such as problem solving. This information is extremely valuable in identifying areas that require further attention in school curriculum or classrooms.

In Australia comparative information by state and territory is provided in national and state reports published in hard copy and on websites. In addition, following the publication of each major report, a range of more detailed reports is prepared on topics such as the factors influencing the achievement of Indigenous students, and the performance of students who have migrated to Australia. These reports provide important information for educators and policy makers.

Not only are studies of student outcomes important but, increasingly, studies of teachers, their training and education, knowledge, techniques and methodologies, are being developed alongside the testing packages to assist in identifying factors which help students learn and achieve their potential. The TIMSS video study on mathematics teaching (2003), for instance, has provided valuable insights into how maths is taught in Australia compared with a number of other countries.

School and student benefits

Australian schools that participate in international studies are making a valuable contribution to the education community both nationally and internationally and show the rest of the world that Australia is committed to participating in research that benefits education across all nations.

International studies provide schools and students with an opportunity to experience cutting-edge assessments that are designed by international experts, applicable to all participating countries and that meet a high technical standard that is rigorously applied and monitored.

Participating schools and students receive their own results compared with the overall results for Australia and these can be used by the school for evaluative purposes. Students and schools also receive a certificate in appreciation of their participation.

In conclusion, it is important to note that Australia's commitment to international testing began in the early 1960s and has continued and grown since then. The national and international interest in the results of these studies, and the subsequent impacts on policy and curriculum in many countries, makes it even more important that schools and students who have the opportunity to participate in these studies understand the valuable contribution they are making to education, not only in Australia but globally.