Significance of TIMSS

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How Countries Can Profit from Participating in TIMSS

Comparative information is ubiquitous in modern life. This applies particularly to the international arena where we are constantly regaled with league tales on everything from national wealth and cost of living to alcohol consumption and obesity rates. Even the Olympics, which are the epitome of individual effort, are reported primarily in terms of national league tables.

Education too has its international comparisons. There are those who say that, because education is about developing the individual, such comparisons are unnecessary and even to be avoided. Others point to the difficulty of producing valid comparative information in education, particularly across countries which are very different from each other and are at different stages of educational reform, and argue against the exercise on feasibility grounds.

Both views are wrong. The feasibility argument is comprehensively rebutted by the study being launched here today. The Trends in International Mathematics and Science Study demonstrates that valid - and useful - comparative information on pupil achievement across different countries can be assembled, by doing it! It has not been easy, and there have been major technical challenges along the way. The challenges have been met, however, without compromising quality, and the result is this unique source of information on pupils' achievement in mathematics and science around the world which you have in your hands today.

But what of the first issue? Granted that it is possible to produce robust information on pupil performance across countries and over time, why would we want to do it? It is an expensive and painstaking business that consumes resources which could be deployed elsewhere. Do we need this information? What purposes does it serve?

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There are at least four reasons why investment in producing sound comparative information in education is worthwhile. First, there is the simple matter of putting education in the public eye. For all that education is a central responsibility of the state and a key concern for every citizen, it does not generally have a high profile in public debates. Studies like TIMSS have an important role to play here. By creating newsworthy stories, they highlight the importance of education and ensure that for a time at least the public are talking about it. Even if some media coverage focuses solely on the league table aspects of the findings, the fact that education is being covered in prime-time news is to be welcomed. (How much coverage would the Olympics receive if reporting was confined to individuals, shorn of national identity?!)

Secondly, headline comparisons of performance between countries are helpful – and have been used regularly – in identifying areas of concern and action. Many countries have responded to previous studies by using them to kick-start debate on school achievement and develop reform initiatives. There is nothing like a benchmark comparison to focus attention on areas of strength and weakness and to highlight areas where action is needed.

A third reason for studies like TIMSS is that they increase our understanding of national education systems. There are many examples where countries have used TIMSS data to focus on areas of particular concern. Thus, Canada has analyzed TIMSS data to identify the errors that students typically make and then developed instructional material in the light of this knowledge in order to assist teachers. South Africa used the previous study to probe the reasons for the country's low performance and to tease out the interaction between home language and language of instruction. Australia has drawn on TIMSS data to monitor the differences between schools and take informed action as necessary. Jordan has highlighted the importance of teacher attitude and motivation, while Slovenia has examined the impact of different methods of teaching. These are just a few of the numerous examples which testify to the capacity of TIMSS to explain the complex of school and non-school factors that impinge on students' achievement in mathematics and science.

All of these considerations come together in the fourth, and in the end ultimate, reason for doing these studies. *TIMSS helps to improve the provision of education*. Through putting education in the foreground and through building up an understanding of key aspects of teaching and learning, TIMSS is an invaluable resource in improving the quality of education in our schools and colleges. Policy makers are better informed because of it, and can make sounder decisions on policies and the allocation of resources. Teachers likewise gain through a deeper understanding of how students of different kinds learn and what inhibits their learning; they can, moreover, benefit from new instructional materials and techniques which are geared specifically toward maximising student learning.

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Today's study is the latest in a long line of international comparative studies conducted by IEA. We have been engaged in such studies for nearly 50 years now, and the number of countries taking part continues to grow. As you will have heard earlier, 49 countries participated in this study. There is clearly no loss of appetite for the type of information IEA is uniquely placed to provide. If anything, the appetite is growing. The Organisation for Economic Co-operation and Development has now become active in this area, and the European Commission has set up a working group to identify which comparisons are most relevant for education in Europe. As a result, considerable resources are now being committed to producing international indicators in education, and these may well increase further. This is to be welcomed. As we in IEA plan further ambitious studies covering citizenship education and teacher education, as well as continuing to monitor trends in mathematics and science through the TIMSS project and in reading literacy through our PIRLS initiative, we can look forward to a greater wealth of sound comparative information on different education systems.

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