Chapter 8

Boosting Student Learning: PISA for Development

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Introduction

The international community is committed to ensure inclusive and equitable quality education. Education Goal 4 of the Sustainable Development Goals (SDGs) sets clear objectives for all countries to advance cooperation among countries, international organizations, and other partners to identify challenges, take actions, and monitor the progress. SDG 4 also represents a shift of the focus from access to quality of education. Monitoring of the quality requires a system that can measure the actual learning outcomes of children and young people at various ages and levels of education. The Organisation for Economic Co-operation and Development (OECD) international assessments of learning outcomes and skills reflect the magnitude and importance of challenges faced in education and offer measurement tools.

One important contribution of OECD is the Programme for International Student Assessment (PISA). Since 2000, every 3 years, some 80 countries and economies—including 40 middle-income countries and 4 low-income countries—collaborate through the PISA to compare how well their school systems prepare young people for life and work.

The PISA has been providing policy-makers with a powerful tool for policy-making. It assesses competences in reading, mathematics, and science. The assessment is not linked to the school curriculum and it evaluates to what extent students at the end of compulsory education can apply their knowledge to real-life situations and be equipped for full participation in society. The information collected from students and school leaders through background questionnaires also allow understanding of the context of teaching and learning, allowing analysis of the factors related to

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the performance of students. The PISA has been continuously stepping forward in order to respond to emerging policy questions through its innovative assessment. For example, it has paved the way for the assessment of problem-solving in the past, has conducted the assessment focusing on collaboration, and is now responding how we could appreciate the learning of competences that are increasingly becoming critical yet difficult to assess and compare across countries, such as global competence or creative thinking.

Issues and Challenges

Participating countries see that the value of the PISA lies in international benchmarking and peer learning. When OECD asked questions about the policy impact of the PISA on the participating countries, the majority of countries reported that the policies of high-performing countries or improving systems had been influential in their own policy-making processes. Many countries have also developed and introduced new elements of a national assessment strategy or curriculum framework inspired by how the PISA assesses students' competencies to apply skills and knowledge and to solve unknown problems.¹

The PISA can help countries reflect on what policies and practices appear to be related to students' performance in countries and economies that are recording high performance or showing significant improvement over time. OECD is very aware of the various circumstances in different countries and economies (with more than 80 participating in PISA 2018). There is no "one size fits all" education model for countries and economies, but the PISA provides countries with the evidence to appreciate challenges, to learn from the experiences of other successful countries, and to create a momentum for collective actions to make change happen for improvement.

Proposed Solutions

Enhancing PISA to Make it Relevant to a Wider Range of Countries

As more countries joined the PISA, it became apparent that the design and implementation models for the assessment needed to evolve to successfully cater to a larger and more diverse set of countries, including a growing number of middle- and low-income countries. In response to this challenge, OECD and a number of partners launched the PISA for Development initiative in 2013, which further develops

¹OECD. (2012b). The Policy Impact of PISA: An Exploration of the Normative Effects of International Benchmarking in School System Performance

and differentiates the PISA data-collection instruments to produce results that better support evidence-based policy-making in middle- and low-income countries.²

PISA data show that most of the middle- and low-income countries share the concern of the concentration of students at the lower levels of the PISA proficiency scales, and an important share of 15-year-olds who are out-of-school. For policy-makers in these countries to better understand how to improve students' learning and how to support teachers and school systems to help their students more effectively, they need data that illustrate more in detail the status of schooling and learning of 15-year-olds. Conducting a large-scale international survey like the PISA is another challenge for middle- and low-income countries, which have no or little experience with international or national large-scale assessment. Building the capacity of participating countries to conduct large-scale assessments, and to analyze and use the results to support evidence-based policy-making, is a key for success.

In view of contributing to the monitoring and achievement of the SDGs, and of facilitating and encouraging the participation of a wider range of countries in the PISA, the initiative of PISA for Development aims at enhancing the PISA survey through the following means:

- The descriptive power of cognitive assessments in reading, mathematics, and science enhanced to meet a wider range of student abilities. This entails the extension of the conceptual frameworks to describe in more detail baseline skills, and the selection and use of existing PISA items that are targeted at lower levels of student performance and enhanced to reflect the context of a wider range of countries while also guaranteeing international comparability.
- Contextual questionnaires and data-collection instruments adapted to a wider range of economic and social contexts (e.g., for students, teachers, parents, schools). This output involves adapting the existing PISA background questionnaires to the realities of developing countries to improve the understanding of how these factors relate to students' performances.
- An approach developed, including a methodology and analytical framework, for including out-of-school 15-year-olds in the assessments. This most challenging output reflects the reality that in most developing countries more than one-third of 15-year-olds are out of school.
- Country capacity in assessment, analysis, and use of results for monitoring and improvement strengthened among participating countries. This output will help to ensure that participation in the PISA helps to strengthen the countries' own large-scale national assessments and the use of results for policy development and decision-making.
- Engagement established with project countries, development partners, and, prospectively, with other countries in order to identify peer-to-peer learning opportunities regarding participation in the PISA.

²PISA for Development Background. <https://www.oecd.org/pisa/aboutpisa/pisa-for-development-background.htm>.

Partnership for Success

Participation in international large-scale assessments, such as the PISA, is a significant financial and technical challenge for low- and middle-income countries, and the partnership of development partners is crucial in this regard. These development partners include multilateral development banks including the Asian Development Bank, the Global Partnership for Education, bilateral donors, foundations, and private donors. Moreover, the PISA is technically complex, operationally demanding, and statistically advanced and requires a significant commitment from countries to implement successfully.

Countries that are participating in PISA for Development benefit from the “capacity building” option and will benefit from a range of capacity-building and peer learning activities. At the outset of the assessment cycle, the country undergoes a detailed analysis of its ability to implement the PISA, measuring existing capacities, and identifying the competencies that require development. Based on this analysis, the country develops a capacity-building plan and a project implementation plan. These plans address the human and financial resources required to implement the assessment successfully and to achieve the target capacities in accordance with the PISA schedule. The capacity-building plan includes training and development facilitated by OECD on a variety of topics, including framework and item development, translation and adaptation, sampling, and coding of students’ responses. In addition, OECD and its contractors support the country’s implementation of the assessment at each stage. Countries also engage in peer-to-peer learning exchanges with experienced PISA countries.³ For example, Cambodia is accompanied by the Republic of Korea throughout the implementation of PISA for Development, in the framework of peer-to-peer support.

Countries also benefit from “analysis and reporting” support for the preparation of national PISA analysis in collaboration with OECD. For the purpose of making the best impact out of PISA participation, countries also engage in (i) developing a strategy to engage and communicate with a variety of stakeholders throughout the project, including policy-makers, academics, media, school leaders, teachers, parents, and students; (ii) building national capacity for data analysis, interpretation of assessment results, and reporting; (iii) producing a country report presenting PISA results for international benchmarking of performance, including relevant analyses and information based on national policy priorities defined during the implementation process; and (iv) presenting the country report and disseminating results, particularly for use in evidence-based policy discussions and decision-making.⁴

³PISA for Development Brief 14. <https://www.oecd.org/pisa/pisa-for-development/14-Capacity-building.pdf>.

⁴PISA for Development Brief 25 https://www.oecd.org/pisa/pisa-for-development/25-Strengthening_analysis_reporting_in%20PISA_D_countries.pdf.

Examples of Good Practices

PISA results set the agenda for policy dialogue among policy-makers and experts. For example, based on the results of the PISA, Korean policy-makers have seriously considered the fact that gender difference has been increased and the student ratio of high performance has been lower than the other high-performing countries.⁵ This resulted in the development of strategies to monitor and improve the proportion of top performers. The Republic of Korea has also studied how its students are performing by item types and reflected the findings on the curriculum review and the reform of teaching practices.

Brazil took a major step forward for accountability, inspired by the PISA. A national census-based assessment for students in grades 4 and 8 and its results were combined with repetition and dropout rates in 2005 to create an index of school quality, the Basic Education Development Index (IDEB). This index gave schools, municipalities, and states an incentive to improve the quality and equity of education and a benchmark against which to monitor progress. The IDEB is set individually for each school and is scaled so that its levels are aligned with those of the PISA.⁶

Application of These Good Practices or Examples

Viet Nam joined the PISA in 2012 and continued its participation in 2015 and 2018. Participation helped Viet Nam to compare its performance with other countries worldwide, and to develop capacity to conduct large-scale assessments. International benchmarking has been used for Viet Nam to know where it stands internationally and to monitor the quality and equity of the national education system. Since its first participation in the PISA, Vietnamese students have scored above the OECD average, which triggered the interest of the international educational community. It requires further research to fully explain the success factors of Viet Nam. But its approach to reform and policy-making based on evidence is an illustration of the environment where policy-making is supported by evidence on students' performance and factors related to teaching and learning. Viet Nam has a high potential to continuously improve the access of young people to schooling and at the same time to provide quality education to those who are in school, which has been demonstrated as possible by other PISA countries.

But what do high-performing and improving education systems look like and what success factors and lessons could countries consider for their own education

⁵OECD (2012a). The Policy Impact of PISA: An Exploration of The Normative Effects of International Benchmarking in School System Performance OECD Education Working Paper Number 71.

⁶OECD (2010), Lessons from PISA for the United States, Strong Performers, Successful Reformers in Education, OECD Publishing. <http://dx.doi.org/10.1787/9789264096660-en>.

reform? Some common features of successful education systems were identified through international comparison of PISA data and analysis of policies and practices of strong performers such as Canada, Finland, Japan, and Singapore. Many of these countries are developing and improving their education systems with the following features:⁷

- Making education a priority and developing a commitment to education and a conviction that all students can achieve at high levels
- Attracting, preparing, and continuously developing high-quality teachers and school leaders
- Providing a work organization in which teachers can use their potential and exercise their professionalism
- Aligning incentives for teachers, students, and parents
- Investing resources where they can make the most difference
- Balancing local responsibility with a capable center with authority and legitimacy to act, and finding the right level of school autonomy
- Ensuring coherence of policies and practices.

Countries in Asia, despite their differences in social and economic situations, could reflect on these lessons, along with their in-depth analysis of available data on students' learning, when they design changes in policies and practices for better learning.

Way Forward: Collaboration with Current and Future PISA Countries

In 2018, seven countries (Cambodia, Ecuador, Guatemala, Honduras, Paraguay, Senegal, and Zambia⁸), successfully completed the school-based assessment of the PISA for Development. These countries benefited from the capacity development activities for analysis and reporting, and launched their national report on PISA for Development results. The analysis of the seven participating countries highlighted the important educational challenges these countries will have to address: Only around 23 % of students across the PISA for Development countries attain at least the minimum level of proficiency in reading, compared with the OECD average of 80 %. The PISA for Development results also tell us what is possible in education in the participating countries and highlight some of the factors that can drive improved outcomes, such as eliminating grade repetition, particularly among boys; ensuring quality learning time; and allocating resources more equitably.

⁷ Adapted from OECD (2011), *Strong Performers and Successful Reformers in Education: Lessons from PISA for the United States* and Schleicher (2018), *World Class: How to Build a 21st-century school system*.

⁸ Bhutan participated in the PISA for Development and launched its national report in 2019.

The PISA for Development initiative demonstrated that the PISA can increase the resolution and relevance of its instruments for low performers in OECD countries. More generally, all countries in the PISA have been benefitting from the opportunity PISA for Development has provided for including more diversity in policies and practices, enriching analyses by having a greater range of points of comparisons, and also increasing the opportunities for peer learning. The outputs of PISA for Development have already been integrated in the main PISA assessment starting with PISA 2021.

This helped the PISA both to incorporate increasing numbers of participants in the assessment and to offer existing participants a wider range of benefits, such as capacity building for data analysis and reporting, and the inclusion of out-of-school youth. The education systems of the PISA for Development countries, and low-to-middle-income countries more generally, have the potential to ensure that all their children and young people achieve at least minimum levels of proficiency in basic skills.

Conclusion

Boosting student learning starts with a good understanding of challenges that countries face and best practices that could be learned from the experiences of others. In the context of international commitment to achieve Sustainable Development Goal 4 in the field of education, countries could build on the results of international assessments like the PISA. To do so, international and regional cooperation could provide more support for countries to strengthen capacity to conduct policy-relevant analysis of survey data, to reflect evidence of areas for improvement in their educational reforms, and to develop policies drawing on experiences of other countries while taking into account each country's specificities.

Link to the presentation material: <https://events.development.asia/materials/20160919/boosting-student-learning-programme-international-student-assessment-development>.

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