

PISA's Impact on China's education policy

-- by analyzing the reports of the ministry of the Republic of China

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Abstract. This article analyzes PISA's impact on China's education policy. This is done by analyzing the reports related to PISA released by the ministry of education of the Republic of China. This study aims to demonstrate how Chinese government utilizes the PISA result to support the previous decisions about education policy or to identifies problems existing in the national education system? The analysis shows that PISA mainly impact China's education policy in five ways: (1) PISA is considered as an external but legitimate barometer to measure the national education system (2) PISA is used as a reference to make technical improvement to the national educational system (3) PISA is used to generate evidence for existing policies. (4) PISA is used to find out future required development in the national education system. (5) PISA is helping to create a new international identity for the country which is one of the main goals of the ongoing educational reform. Thus, the analysis shows that the PISA result is used to support some existing policies and to improve the country's political situation. However, it does have a substantial impact on the national educational policy, especially in the assessment area.

Keywords: PISA; Education policy; Assessment; ILSA.

1. Introduction

The 'Program for International Student Assessment' (PISA) is an international large-scale assessment conducted by OECD--an intergovernmental organization that has policy influence on its member nations and has a growing impact worldwide. OECD is mainly concerned about economic policy, but education is having an elevating status in its strategy in the background of an emerging 'knowledge economy' and that education is reframed as essential to maintain national economic competitiveness within an economic human capital paradigm. OECD's 'Green Book' in the 70s was its first attempt to conduct an international comparative assessment of student performance in education. In the 1980s, OECD started to concentrate on using indicators to measure educational success and the 'International Indicators of Educational Systems'(INES) project was its very first attempt of it . PISA roots in OECD's first attempts at international assessment and becomes more developed and sophisticated. PISA is conducted to measure 15-year-olds' ability in literacy reading, mathematics and science every three years. Instead of evaluating students' mastery of the school curriculum, PISA measures students' ability relevant to everyday, adult life because it reveals how well schools prepare students for life after receiving a formal education. Since the year 2000 it has been conducted, PISA goes far beyond the 34 members of OECD: in 2018 it analyzed and compared academic performances across 79 different countries and regions.

PISA is now having an influential effect on the national education policies of the participating countries, although the extent of influence varies across countries and regions. In some countries, PISA and its results have led to profound education reforms. For example, German States started many programs such as Chemie im Kontext(CHIK) and Physik im Kontext(PIKO) at local and federal level to approach problems that the disappointing PISA-2000 results had revealed . In some other countries, PISA has caused a smaller scope of policy adjustments to the national education system. For example, the Finnish government decided to harmonize the education system by raising the proportion of core courses that are required to be studied in comprehensive schools.

China took part in PISA in 2009 for the first time. China's participation has two notable features. Firstly, only few areas that were selected by the government instead of the whole country participate

in PISA. Although The scope of China's participation has kept expanding, not all the areas were included in it. In 2018, 12058 students from 361 schools in four areas engaged in PISA comparing to 5115 students from 152 schools in one area engaged in the assessment in 2009. And according to the report of '2022 working points' released by the government, China will continue to participate in PISA in 2022. However, it can't be ignored that the participating areas are not chosen randomly, instead, they represent the most developed regions in China. The government even replaced Guangdong by Jiangsu in PISA2018 after the national ranking dropped from 1st to 10th in PISA 2015 which is likely to be due to the inclusion of Guangdong. Secondly, China has got excellent grades in PISA since its participation. The grades of three subjects were higher than the OECD average every time and China rated at the top of the list in 2009, 2012 and 2018.

A key aspect of understanding PISA in China is understanding how PISA influences China's education policy as one of the explicitly stated objectives of extensive international assessments like PISA is the creation of international comparative evidence based for the establishment and implementation of educational policy.

This essay is concentrated on analyzing how PISA influences China's ongoing education reform. The central government is reacting to PISA as PISA has been mentioned and connected to some specific reform proposals frequently in government documents and official reports. However, PISA did not directly trigger an educational reform in China. For one thing, in terms of chronological order, China has been undergoing continuous educational reform since Reform and Opening Up and the government already recognized that there are problems existed in the education system before the participation of PISA. For another, there is no education policy 'shock' Phenomenon occurring in the case of China's participation as the grades that China's were so great that 'there is no deviation from the norm'. The two together can be inferred that PISA did not spark significant large-scale national educational reform in China, instead, it was likely to be introduced as a tool to supplement the ongoing educational reform in the nation.

Several researchers have contributed to understanding PISA's interaction with China's educational policy. Camilla Addey and Sam Sellar have outlined a framework including seven rationales for analyzing the motivations for countries' participation in international large-scale assessments. Gita Steiner-Khamsi discusses how governments appropriate ILSAs for national agenda setting. Verger develops justifications for ILSA participation using the neo-institutionalism, political economy, and rationalism paradigms for understanding global education policies. Mary Hamilton examines how ILSAs interact with the larger society they want to improve and serve is examined, with a focus on the discursive work carried out by various interest groups. Marjaana Rautalin, Pertti Alasuutari and Eetu Vento investigates PISA's contribution to the globalisation of education policies. Jiliu analyzed how different policy actors including government rationalise, document, and understand China's PISA participation. Z Hu analyzed PISA's localised meanings in China and its use as a tool to advance the country's development strategy and support educational reforms by examining PISA's media discourses. Helena Hinke Dobrochinski Candido, Anyara Granskog, and Lai Cheuk Tung analyzed the political implications of China's participation in PISA. Charlene Tan discovers that Chinese education officials use PISA data in a selective manner, emphasising the issues of academic load and "school choice fever," and redefining the purposes of education in order to legitimise and reinforce contentious reform messages and initiatives in Shanghai. . Sitian Chen analyses China's patterns of learning from PISA in education monitoring especially in "Compulsory Education Quality Monitoring Program".

However, previous studies of understanding of China's participation in PISA have not analyzed how PISA and its results impact China's education policy, especially the ongoing education reform. Thus, the research question is: How do Chinese government utilize the PISA result to support the previous decisions about education policy or to identifying problems existing in the national education system?

2. Methodology

The study uses a document research method and collects reports related to PISA released by the ministry of the Republic of China. This qualitative method can be more useful for identifying how PISA functions in the context of China's ongoing educational reform and its economic and social background. The study began with a review of all published (2012–2022) reports by the ministry of education of the Republic of China relating to the keywords: 'PISA' on the Ministry of Education online document depository. There were 84 reports collected after the initial search, 12 of them were excluded because they were articles that were reprinted rather than directly published by the ministry.

3. Discussion

3.1 PISA as a legitimate and important indicator

PISA and its research reports were acknowledged by national government due to China's success in the PISA, and PISA was promoted as a valid indicator delivering accurate and comparable results. The citation above is an example of this argumentation.

China's participation in the PISA test serves a number of objectives, including understanding the quality of China's basic education in the global context, identifying advantages, and boosting self-confidence, as well as identifying problems and shortcomings, pinpointing areas for improvement for schools, education systems, and the government, and developing more effective education policies. PISA offers a fresh viewpoint to consider the state of and issues with China's basic education growth, which aids in our ability to comprehend how China's education is affected by globalisation and to optimise and enhance China's educational strategies..(2018-12-4 zhongbinglin <pisa test, what do we need to pay attention to?>

In the quotation above, the official bases the claim that PISA is a valid indicator of the standard of China's basic education in the international context.

However, it is noteworthy that on the basis of acknowledging the scientificity and benefits PISA has to China's educational development, the government stresses that it is not absolutely applicable to China, because China has its own national conditions.

3.2 Technical improvement

Rather than completely copying PISA's model to assess domestic students, China is using PISA to make technical improvements to its national assessment system. During the meeting with the Secretary General of OECD An Hull in 2013, Minister of Education Yuan Guiren stated that China would participate in the design and evaluation of OECD education programs in an appropriate way, drawing on its good methods, ideas and successful practices.

Specifically, China has used PISA to promote technical improvement related to education in three aspects which are the Green Index Evaluation System, learning and evaluation based on big data and the Compulsory Education Quality Monitoring Program.

Shanghai take part in PISA in 2009 for the first time, after that, Shanghai developed 'Green Index Evaluation System' in 2012 based on PISA. Two years later, it was expanded to a nationwide evaluation standard. The evaluation indicator framework released this time draws on the practices of PISA test, including five aspects and 20 key indicators. Change from single-aspect evaluation to comprehensive evaluation.

Moreover, China is trying to learn from PISA about how to make use of big data in education. PISA makes full use of its organization's knowledge and literacy test and the questionnaire data for schools, teachers, students and parents to conduct in-depth mining and analyze the main factors affecting education in various countries. According to 'Reply to Recommendation No. 3428 of the Third Session of the Thirteenth National People's Congress, the next round of monitoring work will learn from PISA and other ILSAs and monitoring programmes, improving the evaluation techniques, such as exploring human-computer interactive testing, computer adaptive testing

The last one is the Compulsory Education Monitoring Program, which is also called the Program for Chinese Student Assessment (PCSA) and is considered as Chinese version of PISA by the government. It directly derived from PISA. In terms of assessment concept, PCSA has absorbed the assessment concept of PISA that emphasizes comprehensive quality and has set up several ability indicators for each subject. In the measurement method, the technique of "subject test + questionnaire survey" has been used for monitoring in numerous worldwide monitoring programmes including China's monitoring program. The Chinese monitoring system makes use of the worldwide monitoring program's expertise in the design of matrix questions, the quantitative scaling of exams, and the cross-year equivalency when it comes to assessment technologies. However, it is stressed in the report that compared to PISA, PCSA has a few innovations comparing with PISA. For example, moral education, sports and art are included in the monitoring field, and labor education monitoring is explored to highlight the concern for the comprehensive development of students and concentrate on the six monitoring disciplines' focus areas of curriculum, condition guarantee, teacher allocation, disciplinary instruction, and school management to provide a focus for the improvement and quality of education and teaching.

3.3 Generate evidence for policies

There are mainly two ways that China government uses PISA results to generate evidence for policies according to the government officials, the first one is attributing the great Pisa results that China gets to previous education reforms, the second one is using PISA results to support ongoing educational policies.

The first one means emphasizing that it is the educational reform and decisions made nationwide including some legal and educational reforms in recent years and some characteristics of China's education system has led to good PISA results. Three main topics appeared in the collected reports: suzhi-oriented curriculum reform, National Training Plan for Kindergarten Teachers in Primary and Secondary Schools and the development path of socialist education with Chinese characteristics.

As for supporting ongoing policies, there are two topics that appeared in the relevant reports. The first topic is the school choosing policy in 2012. The government used the result of PISA to illustrate the interschool differentiation was not severe in Shanghai in order to quell the widely opposition among parents. The second topic is the double reduction policy in recent years. The government used the results to show that there was little correlation between after-school remedial courses and students' academic performance, which means remedial courses are not an effective way to improve children's performance, thus to weaken the opposition to the double reduction policy.

3.4 Future required development according to the results

China performed well in the three subjects of PISA, however, according to the reports released by the ministry of education of the Republic of China, instead of completely affirming the national education system, China is trying to find out how could the educational system make further improvement by analyzing the PISA results. The way that China makes the analysis is by using the other variations provided by the questionnaires to make multiple evaluations and there are five major problems that are pointed out and stressed by the government.

Firstly, there is a need to reduce Chinese students' School work burden and increase their learning efficiency. Compared to other countries, Chinese students spend too much time learning. In terms of learning efficiency, the ranking of Beijing, Shanghai, Jiangsu and Guangdong will drop from the top to the bottom third, and students will spend too much time studying but have low returns. Secondly, Chinese students have a low sense of belonging and satisfaction and the government tries to figure out how to make students study and live actively. Thirdly, education equity is still a noteworthy question in China. From the PISA results, the balance between schools is inadequate. Students from four Chinese provinces and cities had an average inter-school reading literacy disparity of 42%, placing the country in 17th place among the studied nations. Another differentiation exists between rural and urban areas. According to comparison data provided by PISA, rural areas in China are facing

a shortage of school hardware and teacher. And the teachers are lacking teaching enthusiasm and teaching methods. Fourthly, the national students are unwilling to engage in scientific careers compare to other countries that perform well in PISA. Lastly, the government needs to take action to promote reading among students. In terms of family book collection, China is lower than some western countries with high academic performance and a careful analysis of the data shows that only students with good family economic conditions and good grades read more books in Beijing, Shanghai, Jiangsu and Zhejiang. In western countries, no matter what their family economic conditions are, students with good grades always read more books.

3.5 Creation of a new identity

The government is utilizing the result of PISA to support the view that the development level of China's education has entered the top ranks in the world, playing an irreplaceable role in economic transformation and upgrading, innovation-driven development, improvement of people's livelihood and cultural prosperity. And China is having the right to introduce its experience in education to the world. For example, the government is inviting teachers from other countries to come to schools in Shanghai to learn 'Shanghai experience'. It is stressed that A huge change has taken place in China in 70 years.

4. Conclusion

To conclude, the Ministry of the Republic of China mainly interprets and utilize the PISA results in five ways. Firstly, as an external assessment system, PISA is recognized by China government for its scientific nature. The only critical side about PISA is limited to its adaptability to the specific conditions of China and does not involve the denial of its scientific nature. Thus, it gives PISA the legitimacy to explain the national education phenomenon. Secondly, PISA is referenced by the government to improve its national educational assessment system. This reference includes the use of big data in education and using PISA as a model to design a new national educational assessment system. But the new assessment system has been only considered as a try so far, it has been only piloted in few areas and in these areas, it has not replaced the main assessment mechanism. Thirdly, the government uses the excellent grades that China has gotten in PISA to legitimate the education policies in the past and support the ongoing policies. Fourthly, the government utilizes the multiple variables and the relationships between these variables provided by the PISA's questionnaire to analyze the exact problems in China's current education system to serve the strategic themes of the current education reform which is 'Adhering to a people-oriented approach and the comprehensive implementation of quality education'. Lastly, the government is utilizing PISA's results to construct a new international identity which is advanced and has its unique methods on education that worth other countries learning from.

China has its own complete education evaluation system, but at the same time, it is aware of the necessary reform in the new era, and is making efforts to develop its own education evaluation system based on PISA. Future research could focus on the tension between the international large-scale assessment system like PISA and China's national assessment in a cultural context.

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