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PISA AS SUPRANATIONAL EDUCATIONAL ASSESSMENT: LIGHTS AND SHADES IN EQUITY

Lis Cercadillo
Jaime Vaquero Jiménez
National Institute for Educational Assessment (INEE)

This monographic issue of the Journal of Supranational Policies of Education (JoSPoE) focuses on the data and results of the PISA (Program for International Student Assessment) study, in any of its editions since the first in 2000, not only from international perspective, but also from a wide variety of comparative topics and analyzes from regional and national perspective, and with a special focus on equity issues.

Since its inception, the participation of countries in PISA has been increasing and is currently one of the main references for educational policies and evaluation in many countries around the world. In its latest edition, PISA 2018, 79 countries from five continents are represented in the study.

On the one hand, its objective to develop international rankings and classifications has been strongly criticized, and it has been reproached for seeking a "universal evaluation" that does not take into account the cultural differences between the countries. Besides, various sectors of the educational community have started to interpret the international classifications as an unfair way to get more impact on the media and social networks.

On the other hand, the amount of researches and publications based on PISA data is enormous, and its continued expansion of its focus, that makes this data deserve a growing interest for its exploitation and analysis. The evaluation through cognitive tests of such competencies as reading, mathematics, and science has been updated with the incorporation of innovative competencies that are relevant for the citizens of the 21st century, although not all key competencies have received the same attention in the study. Context questionnaires of students and directors have been enriched with new perceptions of parents and - more recently - of teachers, and also with different aspects of students' personal and school life.

Since the financial crisis and the economic recession of 2008, some numerous data and studies show us that, despite the indisputable economic development in the globalized world, the economic, social and cultural distance between the countries and, especially, between social classes within countries.

This distance makes social and political advances difficult: certain authors speak of the "collapse of democracy" (Estefanía, 2019), observed and also suffered in times of economic depression as it was in the first half of the last century. As Estefanía notes, at the beginning of 2019, Oxfam Intermón presented a report that marks "the hidden face of prosperity". It focuses on the situation of plutocrats, whose wealth increased by 900,000 million dollars in 2018 (80% of what a country like Spain produces in a year), which is equivalent to increase of 2,500 million dollars a day, while the wealth of the poorest half of the world's population — equivalent to 3.8 billion people — was reduced by 11%. Another relevant trend pointed out in this report is that, as a whole, men own 50% more of the world's wealth than women. And the fundamental problem is its future projection: "Inequality is growing, social mobility between generations is decreasing, and the descendants inherit a greater degree both the wealth and poverty of their predecessors, which makes it impossible for them to get access to the rights and opportunities in equal conditions" (Estefanía, 2019).

Since the formation of the democratic national states, education has become the main instrument for reducing that economic, social and cultural distance. But educating is not always easy for those who want to teach or for those who want to be instructed. The global challenges of education appear clear if we study the quantitative and qualitative data prepared by supranational entities such as the European Union, the UNESCO or the OECD. Equity in education means that educational systems offer the same learning opportunities to all students. The classic factors for measuring equity include such origin as socio-economic, cultural, gender, migrant status, language, physical or intellectual disability. Students with these diverse characteristics have to be able to acquire a level of academic performance, and levels of personal satisfaction, social relationships or self-confidence sufficient to fully develop in their adult lives. Equality and equity do not mean that everyone achieves the same educational results, but the differences in results should not be mainly due to the economic, cultural and social circumstances, because children and young people do not have control over it.

Despite the success stories in achieving the challenge of equity, there is not any country in the world that removed the social and economic barriers that reproduces inherit inequality; and this is visible in access to tertiary education or better paid or more satisfactory jobs. All the countries can do more to improve equity in education. Therefore, in this monograph, our main research question is how public education remains a definitive guarantee of equal opportunities for all.

The first of the articles in this monographic edition, prepared by Joel Rapp and Francesca Borgonovi, deals with the analysis of gender differences in reading and math skills with data from the PISA 2012. The article reviews the traditional argumentation of the existing gender differences regarding socioeconomic, biological factors and stereotypes. It highlights how recent research has focused on the analysis of differences between girls and boys and, in this case, it is proposed to analyze intra-student differences in each competition by exploring each of the groups separately. Its objective is to detect the factors that explain these intrapersonal differences that, a priori, can promote a better performance of the girls in reading relative to their competence in mathematics and a better performance of the boys in mathematics concerning their reading competence.

To perform these analyses, there is a variable created for presenting the difference between math proficiency and proficiency in reading for each student. Then there is a succession of explanatory models of this variable that contain students' personal information and perceptions about themselves: self-concept, self-efficacy or personal motivations. Although the last ones significantly increase exploration of the model, it is concluded that gender is the most important variable to explain this difference. Other analyzed factors related to teachers and schools do not seem to be closely related to the analyzed variable. The study advocates establishing measures that improve the competence of both genders without damaging the result in the other competition. The results were consistent in the international comparison and may explain the persistence of gender stereotypes in math performance and the lower representation of young women in STEM-related careers.

This article analyzes not only the members of the OECD or the EU but all the participating countries. The gender is considered as a fundamental variable to describe intrapersonal differences in the competencies. It is based on personal characteristics and analyzes its influence on the final performance. It does not only seek to detect the factors that may allow girls to improve their mathematical competence but also to deepen those that affect boys, since the skills in reading comprehension influence as much as the mathematical competence for the successful incorporation into the society of the XXI century.

The contribution made by Julio Carabaña and Mariano Fernández Enguita tries to identify the cause of the existing differences in the sense of belonging to the center shown by the different autonomous communities in Spain. It is related to three variables: the language of the school, the language spoken at home and the language of its social environment. The sense of belonging is

essential for academic results and the welfare of students. After reviewing the classic analyzes of the sense of belonging, the authors discard family, personal and school variables for the Spanish case. The linguistic characteristics of Spain and the expanded sample of PISA in all the autonomous communities allow further analysis. First, this situation is approached with the (failed) attempt to justify the differences between bilingual and non-bilingual communities through comparison with the home language versus the language of instruction. It was necessary for raising the hypothesis that the disparity shown is more related to schooling in a vernacular language which, in these autonomous communities, has the least social use for adolescents and their vital environment, also the digital one.

This contribution uses the data from PISA 2015, where all the Spanish autonomous communities participate with an expanded sample for the first time. Although it does not deal with the relationship of the sense of belonging with the performance of the students, which on the other hand does not cease to be insignificant, it focuses on its relationship with the welfare of the students. Current education systems are challenged to ensure that all students show comparable levels of well-being despite their differences. The importance of this document is that it has been able to point out one of the most decisive causes to explain the variability in the sense of belonging of the students to their schools and will, therefore, allow the design of strategies aimed at correcting the deviations socially derived from schooling in other than the majority languages.

Adrian Neubauer addresses the challenge of increasing the migrant population that the European Union countries are facing during the last decade due to the political, economic and social situation of their countries of origin. The study addresses several theories that explain the differences in the performance of immigrant students and describes the obstacles that students face in the educational system that hosts them: heterogeneous distribution according to ownership of the centers, native and instructional language or, among others, training of the faculty members. It presents a comparative analysis of the PISA competences for the native and immigrant population, reviews common elements and differences for the European countries with similar situations through indicators such as resilient students, school segregation and the shortage of material and human resources.

The article by Remco Feskens, Floor van Oort and Cor Sluijter deals with equity in education from inclusiveness and educational justice (fairness). On the one hand, the analysis of inclusiveness takes into account both the 15 years old school population that continues study, as well as the one that reaches a basic level in the PISA competences, which are considered basic to successfully incorporate into today's society. Educational justice is linked to the fact that countries achieve good results regardless of the sociodemographic characteristics of students: the social, economic and cultural index, gender, immigration background, language spoken at home or the age. The proposed statistical model includes all these variables to measure the level of educational justice in the member countries of the European Union. Throughout this study, it is confirmed that the background of immigration, language, and social, economic and cultural characteristics are the ones that have the greatest influence in establishing the level of educational justice for all the systems.

This analysis uses 2015 data and focuses on all countries of the European Union. Equity as an acquisition of basic competences has been one of the objectives that have been set in the framework of the European Union by 2020 (European Commission, 2009) and it is a fundamental part of the UNESCO Sustainable Development Goals (UN, 2015).

The study by Leo Van Waveren and Christine Sälzer incorporates the dimensions of teacher training and new technologies. It explores the importance and use of these dimensions with student results. The report is based on the idea that digital competence depends on the personal, family and school environment of students, so it is essential to know these relationships so that teachers and school directors can promote their development. Throughout the document, a multilevel analysis shows that the vision of principals and teachers differs both in the lack of resources and

personnel and in the perceptions of the need for professional development. The designed model does not allow to test the hypotheses that it poses, although it relates the use of ICTs with age, satisfaction with their work and the content of the received training (initial or subsequent). It also investigates the provision of new technologies to the centers and the need to include them in teacher training. It concludes the need for another type of analysis complementary to PISA to see in which environments students' competence is better developed to their teachers, given that we can only obtain conclusions at the population level and not individually. In this case, the authors consider that a more experimental approach and specific interventions in the center could be more useful.

This article analyzes the situation of the five European countries that participated in the optional questionnaire of new technologies in 2015: the Czech Republic, Germany, Italy, Portugal, Spain. In a digital context that changes so rapidly, equity also requires equal access and use of the new resources offered to teachers, as well as adequate training to obtain the highest possible educational performance. Students need to be prepared to continue developing new skills in technologies and to achieve this goal there is a need for the relevant teacher training.

Finally, the contribution of Elisa Caponera, Carlo Di Chiacchio, Sabrina Greco and Laura Palmerio to this monograph pays attention on equity and PISA values of the involvement of parents in the education of their children and their performance in science, which was the main competition in PISA 2015. Analyze the situation of several Mediterranean countries participating in the study: Spain, Italy, France, Malta, and Portugal.

Based on the fact that differences in origin (according to the socio-economic and cultural index, ESCS) cannot be eliminated, the authors propose to look for strategies that help correct them. Among them, one of those that they consider crucial is the involvement of parents, whose effective action can be investigated through PISA data. The study establishes a model based on observable and latent variables that explain the performance in science and it is concluded that the expectations of parents and their vision of science corrects an important part of the effect of ESCS on student performance. The mediating role of family action reduces differences in origin and favors the equity of educational systems. Other aspects that appear in the analysis are the parents' vision of environmental problems, discussions about science with their sons and daughters and participation in scientific activities at the end of Primary Education. However, the limitations of these studies are also evident when setting causal relationships, for which longitudinal approaches are suitable. Despite these limitations, the analysis indicates that the involvement of families is very positive to reduce differences in origin and not only to improve academic performance.

Throughout this monographic issue, the essential factors related to equity are analyzed and for which PISA proves to be a useful tool that allows to generate a solid base for designing policies that guarantee equal opportunities for all students regardless of its characteristics of origin. It addresses such key characteristics as gender, immigration background, socio-economic and cultural factors, teacher training, identity and sense of belonging to schools or the involvement of families. Undoubtedly, there are other relevant aspects in the analysis of equality and equity in education; With this monograph we have tried to reduce the shadows of the challenge of equity and highlight the lights that educational research offers, focusing on the factors that we consider fundamental and the relationships established between all the variables that take place in this analysis of educational systems. It has been shown how the personal, family and social characteristics of the students are decisive and, aware of the complexity of the subject matter, we can only continue to deepen everything that allows us to generate practices that help us guarantee an inclusive, equitable education and quality to promote lifelong learning opportunities for all (UN, 2015).

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